


**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐

<b>APPLICATION FOR PERMIT TO DRILL</b>				<b>1. WELL NAME and NUMBER</b> NBU 1022-3L3DS		
<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>				<b>3. FIELD OR WILDCAT</b> NATURAL BUTTES		
<b>4. TYPE OF WELL</b> Gas Well <input type="checkbox"/> Coalbed Methane Well: NO <input type="checkbox"/>				<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> NATURAL BUTTES		
<b>6. NAME OF OPERATOR</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.				<b>7. OPERATOR PHONE</b> 720 929-6587		
<b>8. ADDRESS OF OPERATOR</b> P.O. Box 173779, Denver, CO, 80217				<b>9. OPERATOR E-MAIL</b> mary.mondragon@anadarko.com		
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> UTU 01191		<b>11. MINERAL OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		<b>12. SURFACE OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>		
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>		
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>		<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>		<b>19. SLANT</b> VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>		
<b>20. LOCATION OF WELL</b>	<b>FOOTAGES</b>	<b>QTR-QTR</b>	<b>SECTION</b>	<b>TOWNSHIP</b>	<b>RANGE</b>	<b>MERIDIAN</b>
<b>LOCATION AT SURFACE</b>	1561 FSL 415 FWL	NWSW	3	10.0 S	22.0 E	S
<b>Top of Uppermost Producing Zone</b>	1517 FSL 497 FWL	NWSW	3	10.0 S	22.0 E	S
<b>At Total Depth</b>	1517 FSL 497 FWL	NWSW	3	10.0 S	22.0 E	S
<b>21. COUNTY</b> UINTAH		<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 497		<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 1042		
		<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 95		<b>26. PROPOSED DEPTH</b> MD: 8802 TVD: 8800		
<b>27. ELEVATION - GROUND LEVEL</b> 5109		<b>28. BOND NUMBER</b> WYB000291		<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> Permit #43-8496		
<b>ATTACHMENTS</b>						
<b>VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES</b>						
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER			<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN			
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)			<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER			
<input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)			<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP			
<b>NAME</b> Danielle Piernot		<b>TITLE</b> Regulatory Analyst		<b>PHONE</b> 720 929-6156		
<b>SIGNATURE</b>		<b>DATE</b> 06/22/2009		<b>EMAIL</b> danielle.piernot@anadarko.com		
<b>API NUMBER ASSIGNED</b> 43047504910000		<b>APPROVAL</b>  Permit Manager				

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	8802		
Pipe	Grade	Length	Weight			
	Grade I-80 LT&C	8802	11.6			

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	12.25	9.625	0	2170		
Pipe	Grade	Length	Weight			
	Grade J-55 LT&C	2170	36.0			

T10S, R22E, S.L.B.&M.

Kerr-McGee Oil & Gas Onshore LP

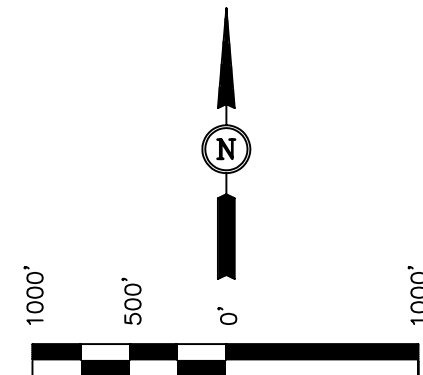
Well location, NBU #1022-03L3DS, located as shown in the NW 1/4 SW 1/4 of Section 3, T10S, R22E, S.L.B.&M., Uintah County, Utah.

### BASIS OF ELEVATION

BENCH MARK (20EAM) LOCATED IN THE SE 1/4 OF SECTION 35, T8S, R21E, S.L.B.&M. TAKEN FROM THE OURAY SE QUADRANGLE, UTAH, UTAH COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 4697 FEET.

### BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



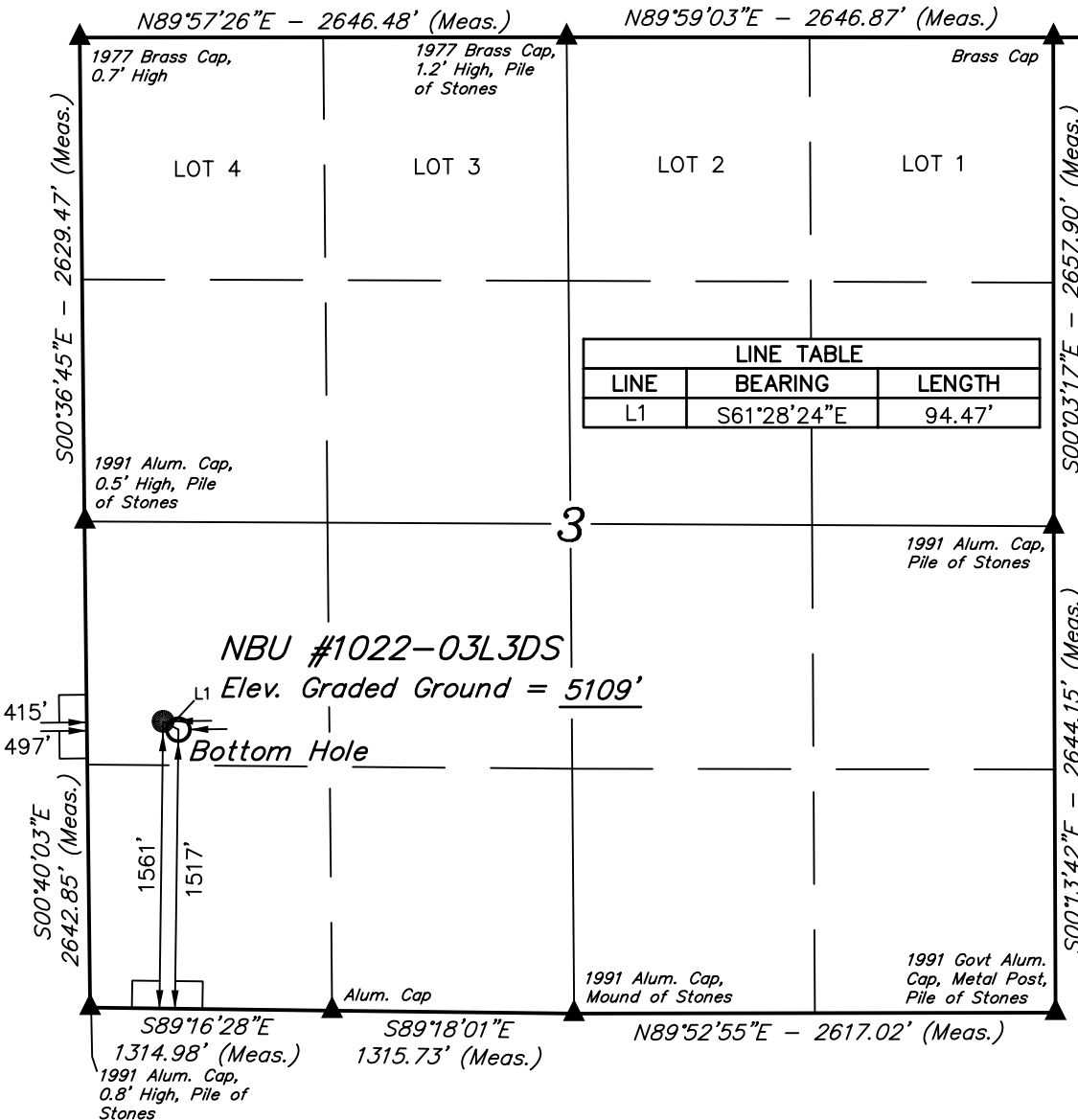
SCALE

### CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR  
REGISTRATION NO. 161319  
STATE OF UTAH

**UINTAH ENGINEERING & LAND SURVEYING**  
85 SOUTH 200 EAST - VERNAL, UTAH 84078  
(435) 789-1017



### LEGEND:

- └─┘ = 90° SYMBOL
- = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.

NAD 83 (TARGET BOTTOM HOLE)	NAD 83 (SURFACE LOCATION)
LATITUDE = 39°58'29.79" (39.974942)	LATITUDE = 39°58'30.24" (39.975067)
LONGITUDE = 109°26'01.17" (109.433658)	LONGITUDE = 109°26'02.24" (109.433956)
NAD 27 (TARGET BOTTOM HOLE)	NAD 27 (SURFACE LOCATION)
LATITUDE = 39°58'29.91" (39.974975)	LATITUDE = 39°58'30.36" (39.975100)
LONGITUDE = 109°25'58.71" (109.432975)	LONGITUDE = 109°25'59.78" (109.433272)

SCALE 1" = 1000'	DATE SURVEYED: 08-14-08	DATE DRAWN: 09-08-08
PARTY D.K. C.K. C.C.	REFERENCES G.L.O. PLAT	
WEATHER HOT	FILE Kerr-McGee Oil & Gas Onshore LP	

APIWellNo:43047504910000



**Scientific Drilling**  
Rocky Mountain Operations

Project: Uintah County, UT  
Site: NBU 1022-3L Pad  
Well: NBU 1022-3L3DS  
Wellbore: OH  
Design: Plan #1

Kerr McGee Oil and Gas Onshore LP



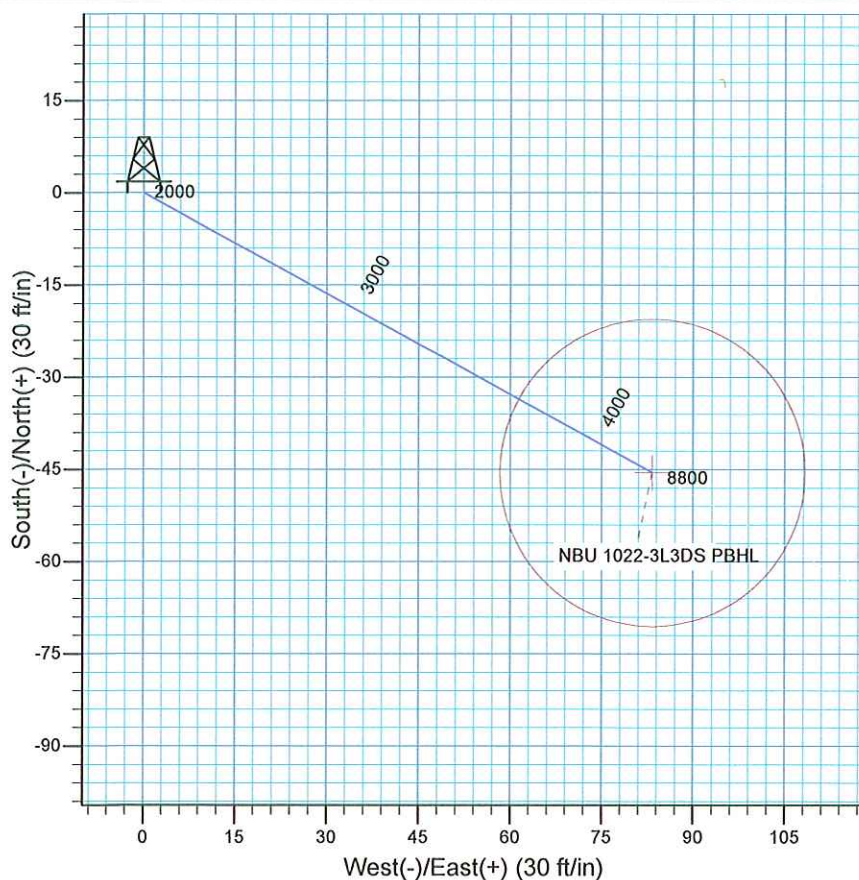
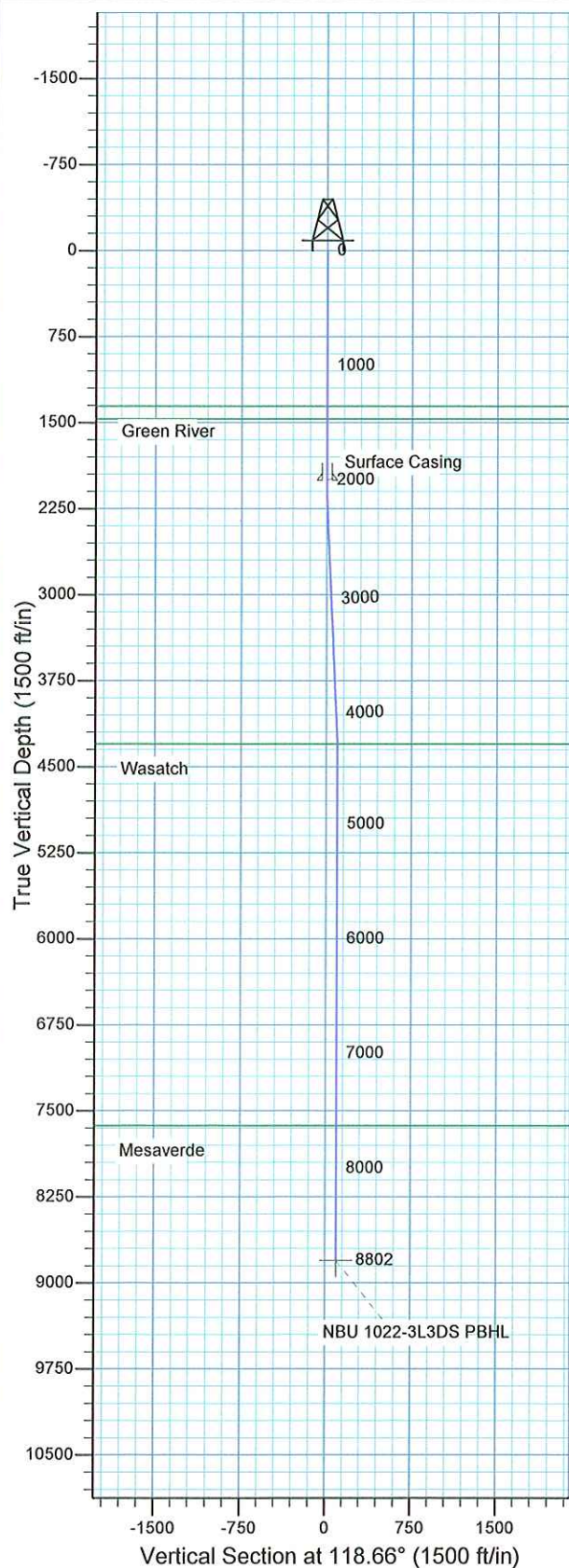
Azimuths to True North  
Magnetic North: 11.37°

Magnetic Field  
Strength: 52612.3snT  
Dip Angle: 65.93°  
Date: 10/20/2008  
Model: IGRF2005-10

WELL DETAILS: NBU 1022-3L3DS

GL 5107' & RKB 18' @ 5125.00ft 5107.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	604668.01	2579142.89	39° 58' 30.360 N	109° 25' 59.780 W



Plan: Plan #1 (NBU 1022-3L3DS/OH)

Created By: Julie Cruse Date: 2008-10-20

PROJECT DETAILS: Uintah County, UT

Geodetic System: US State Plane 1927 (Exact solution)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1866  
Zone: Utah Central 4302  
Location: Sec 3 T10S R22E  
System Datum: Mean Sea Level  
Local North: True

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2100.00	0.00	0.00	2100.00	0.00	0.00	0.00	0.00	0.00	
2185.73	2.57	118.66	2185.70	-0.92	1.69	3.00	118.66	1.92	
4215.37	2.57	118.66	4213.30	-44.61	81.61	0.00	0.00	93.00	
4301.10	0.00	0.00	4299.00	-45.53	83.30	3.00	180.00	94.93	
8802.10	0.00	0.00	8800.00	-45.53	83.30	0.00	0.00	94.93	NBU 1022-3L3DS PBHL



**Scientific Drilling**  
Rocky Mountain Operations

# **Kerr McGee Oil and Gas Onshore LP**

**Uintah County, UT  
NBU 1022-3L Pad  
NBU 1022-3L3DS  
OH**

**Plan: Plan #1**

## **Standard Planning Report**

**20 October, 2008**



## Scientific Drilling Planning Report

Database: EDM 2003.16 Single User Db  
Company: Kerr McGee Oil and Gas Onshore LP  
Project: Uintah County, UT  
Site: NBU 1022-3L Pad  
Well: NBU 1022-3L3DS  
Wellbore: OH  
Design: Plan #1

Local Co-ordinate Reference: Well NBU 1022-3L3DS  
TVD Reference: GL 5107' & RKB 18' @ 5125.00ft  
MD Reference: GL 5107' & RKB 18' @ 5125.00ft  
North Reference: True  
Survey Calculation Method: Minimum Curvature

Project: Uintah County, UT  
Map System: US State Plane 1927 (Exact solution)  
Geo Datum: NAD 1927 (NADCON CONUS)  
Map Zone: Utah Central 4302  
System Datum: Mean Sea Level

Site: NBU 1022-3L Pad, Sec 3 T10S R22E  
Site Position: Northing: 604,677.53 ft Latitude: 39° 58' 30.450 N  
From: Lat/Long Easting: 2,579,160.58 ft Longitude: 109° 25' 59.550 W  
Position Uncertainty: 0.00 ft Slot Radius: in Grid Convergence: 1.32 °

Well: NBU 1022-3L3DS, 1561' FSL 415' FWL  
Well Position: +N/-S 0.00 ft Northing: 604,668.01 ft Latitude: 39° 58' 30.360 N  
+E/-W 0.00 ft Easting: 2,579,142.89 ft Longitude: 109° 25' 59.780 W  
Position Uncertainty: 0.00 ft Wellhead Elevation: ft Ground Level: 5,107.00 ft

Wellbore: OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2005-10	10/20/2008	11.37	65.93	52,612

Design: Plan #1

### Audit Notes:

Version: Phase: PLAN Tie On Depth: 0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	118.66

### Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,185.73	2.57	118.66	2,185.70	-0.92	1.69	3.00	3.00	0.00	118.66	
4,215.37	2.57	118.66	4,213.30	-44.61	81.61	0.00	0.00	0.00	0.00	
4,301.10	0.00	0.00	4,299.00	-45.53	83.30	3.00	-3.00	0.00	180.00	
8,802.10	0.00	0.00	8,800.00	-45.53	83.30	0.00	0.00	0.00	0.00	NBU 1022-3L3DS PB



# Scientific Drilling Planning Report

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**Project:** Uintah County, UT  
**Site:** NBU 1022-3L Pad  
**Well:** NBU 1022-3L3DS  
**Wellbore:** OH  
**Design:** Plan #1

**Local Co-ordinate Reference:**  
**TVD Reference:**  
**MD Reference:**  
**North Reference:**  
**Survey Calculation Method:**

Well NBU 1022-3L3DS  
GL 5107' & RKB 18' @ 5125.00ft  
GL 5107' & RKB 18' @ 5125.00ft  
True  
Minimum Curvature

## Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,356.00	0.00	0.00	1,356.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Green River</b>									
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,465.00	0.00	0.00	1,465.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Bird's Nest</b>									
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Surface Casing</b>									
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,185.73	2.57	118.66	2,185.70	-0.92	1.69	1.92	3.00	3.00	0.00
2,200.00	2.57	118.66	2,199.96	-1.23	2.25	2.56	0.00	0.00	0.00
2,300.00	2.57	118.66	2,299.86	-3.38	6.19	7.05	0.00	0.00	0.00
2,400.00	2.57	118.66	2,399.76	-5.53	10.13	11.54	0.00	0.00	0.00
2,500.00	2.57	118.66	2,499.65	-7.69	14.06	16.03	0.00	0.00	0.00
2,600.00	2.57	118.66	2,599.55	-9.84	18.00	20.51	0.00	0.00	0.00
2,700.00	2.57	118.66	2,699.45	-11.99	21.94	25.00	0.00	0.00	0.00
2,800.00	2.57	118.66	2,799.35	-14.14	25.88	29.49	0.00	0.00	0.00
2,900.00	2.57	118.66	2,899.25	-16.30	29.81	33.98	0.00	0.00	0.00
3,000.00	2.57	118.66	2,999.15	-18.45	33.75	38.46	0.00	0.00	0.00
3,100.00	2.57	118.66	3,099.05	-20.60	37.69	42.95	0.00	0.00	0.00
3,200.00	2.57	118.66	3,198.95	-22.75	41.63	47.44	0.00	0.00	0.00
3,300.00	2.57	118.66	3,298.85	-24.91	45.56	51.93	0.00	0.00	0.00
3,400.00	2.57	118.66	3,398.75	-27.06	49.50	56.41	0.00	0.00	0.00
3,500.00	2.57	118.66	3,498.65	-29.21	53.44	60.90	0.00	0.00	0.00
3,600.00	2.57	118.66	3,598.55	-31.36	57.38	65.39	0.00	0.00	0.00
3,700.00	2.57	118.66	3,698.45	-33.51	61.31	69.88	0.00	0.00	0.00
3,800.00	2.57	118.66	3,798.35	-35.67	65.25	74.36	0.00	0.00	0.00
3,900.00	2.57	118.66	3,898.24	-37.82	69.19	78.85	0.00	0.00	0.00
4,000.00	2.57	118.66	3,998.14	-39.97	73.13	83.34	0.00	0.00	0.00
4,100.00	2.57	118.66	4,098.04	-42.12	77.06	87.83	0.00	0.00	0.00
4,200.00	2.57	118.66	4,197.94	-44.28	81.00	92.31	0.00	0.00	0.00
4,215.37	2.57	118.66	4,213.30	-44.61	81.61	93.00	0.00	0.00	0.00
4,300.00	0.03	118.66	4,297.90	-45.53	83.29	94.93	3.00	-3.00	0.00
4,301.10	0.00	0.00	4,299.00	-45.53	83.30	94.93	3.00	-3.00	0.00
<b>Wasatch</b>									



# Scientific Drilling Planning Report

**Database:** EDM 2003.16 Single User Db  
**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT  
**Site:** NBU 1022-3L Pad  
**Well:** NBU 1022-3L3DS  
**Wellbore:** OH  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well NBU 1022-3L3DS  
**TVD Reference:** GL 5107' & RKB 18' @ 5125.00ft  
**MD Reference:** GL 5107' & RKB 18' @ 5125.00ft  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

## Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,400.00	0.00	0.00	4,397.90	-45.53	83.30	94.93	0.00	0.00	0.00
4,500.00	0.00	0.00	4,497.90	-45.53	83.30	94.93	0.00	0.00	0.00
4,600.00	0.00	0.00	4,597.90	-45.53	83.30	94.93	0.00	0.00	0.00
4,700.00	0.00	0.00	4,697.90	-45.53	83.30	94.93	0.00	0.00	0.00
4,800.00	0.00	0.00	4,797.90	-45.53	83.30	94.93	0.00	0.00	0.00
4,900.00	0.00	0.00	4,897.90	-45.53	83.30	94.93	0.00	0.00	0.00
5,000.00	0.00	0.00	4,997.90	-45.53	83.30	94.93	0.00	0.00	0.00
5,100.00	0.00	0.00	5,097.90	-45.53	83.30	94.93	0.00	0.00	0.00
5,200.00	0.00	0.00	5,197.90	-45.53	83.30	94.93	0.00	0.00	0.00
5,300.00	0.00	0.00	5,297.90	-45.53	83.30	94.93	0.00	0.00	0.00
5,400.00	0.00	0.00	5,397.90	-45.53	83.30	94.93	0.00	0.00	0.00
5,500.00	0.00	0.00	5,497.90	-45.53	83.30	94.93	0.00	0.00	0.00
5,600.00	0.00	0.00	5,597.90	-45.53	83.30	94.93	0.00	0.00	0.00
5,700.00	0.00	0.00	5,697.90	-45.53	83.30	94.93	0.00	0.00	0.00
5,800.00	0.00	0.00	5,797.90	-45.53	83.30	94.93	0.00	0.00	0.00
5,900.00	0.00	0.00	5,897.90	-45.53	83.30	94.93	0.00	0.00	0.00
6,000.00	0.00	0.00	5,997.90	-45.53	83.30	94.93	0.00	0.00	0.00
6,100.00	0.00	0.00	6,097.90	-45.53	83.30	94.93	0.00	0.00	0.00
6,200.00	0.00	0.00	6,197.90	-45.53	83.30	94.93	0.00	0.00	0.00
6,300.00	0.00	0.00	6,297.90	-45.53	83.30	94.93	0.00	0.00	0.00
6,400.00	0.00	0.00	6,397.90	-45.53	83.30	94.93	0.00	0.00	0.00
6,500.00	0.00	0.00	6,497.90	-45.53	83.30	94.93	0.00	0.00	0.00
6,600.00	0.00	0.00	6,597.90	-45.53	83.30	94.93	0.00	0.00	0.00
6,700.00	0.00	0.00	6,697.90	-45.53	83.30	94.93	0.00	0.00	0.00
6,800.00	0.00	0.00	6,797.90	-45.53	83.30	94.93	0.00	0.00	0.00
6,900.00	0.00	0.00	6,897.90	-45.53	83.30	94.93	0.00	0.00	0.00
7,000.00	0.00	0.00	6,997.90	-45.53	83.30	94.93	0.00	0.00	0.00
7,100.00	0.00	0.00	7,097.90	-45.53	83.30	94.93	0.00	0.00	0.00
7,200.00	0.00	0.00	7,197.90	-45.53	83.30	94.93	0.00	0.00	0.00
7,300.00	0.00	0.00	7,297.90	-45.53	83.30	94.93	0.00	0.00	0.00
7,400.00	0.00	0.00	7,397.90	-45.53	83.30	94.93	0.00	0.00	0.00
7,500.00	0.00	0.00	7,497.90	-45.53	83.30	94.93	0.00	0.00	0.00
7,600.00	0.00	0.00	7,597.90	-45.53	83.30	94.93	0.00	0.00	0.00
7,628.10	0.00	0.00	7,626.00	-45.53	83.30	94.93	0.00	0.00	0.00
<b>Mesaverde</b>									
7,700.00	0.00	0.00	7,697.90	-45.53	83.30	94.93	0.00	0.00	0.00
7,800.00	0.00	0.00	7,797.90	-45.53	83.30	94.93	0.00	0.00	0.00
7,900.00	0.00	0.00	7,897.90	-45.53	83.30	94.93	0.00	0.00	0.00
8,000.00	0.00	0.00	7,997.90	-45.53	83.30	94.93	0.00	0.00	0.00
8,100.00	0.00	0.00	8,097.90	-45.53	83.30	94.93	0.00	0.00	0.00
8,200.00	0.00	0.00	8,197.90	-45.53	83.30	94.93	0.00	0.00	0.00
8,300.00	0.00	0.00	8,297.90	-45.53	83.30	94.93	0.00	0.00	0.00
8,400.00	0.00	0.00	8,397.90	-45.53	83.30	94.93	0.00	0.00	0.00
8,500.00	0.00	0.00	8,497.90	-45.53	83.30	94.93	0.00	0.00	0.00
8,600.00	0.00	0.00	8,597.90	-45.53	83.30	94.93	0.00	0.00	0.00
8,700.00	0.00	0.00	8,697.90	-45.53	83.30	94.93	0.00	0.00	0.00
8,800.00	0.00	0.00	8,797.90	-45.53	83.30	94.93	0.00	0.00	0.00
8,802.10	0.00	0.00	8,800.00	-45.53	83.30	94.93	0.00	0.00	0.00



# Scientific Drilling Planning Report

Database: EDM 2003.16 Single User Db  
Company: Kerr McGee Oil and Gas Onshore LP  
Project: Uintah County, UT  
Site: NBU 1022-3L Pad  
Well: NBU 1022-3L3DS  
Wellbore: OH  
Design: Plan #1

Local Co-ordinate Reference:  
TVD Reference:  
MD Reference:  
North Reference:  
Survey Calculation Method:

Well NBU 1022-3L3DS  
GL 5107' & RKB 18' @ 5125.00ft  
GL 5107' & RKB 18' @ 5125.00ft  
True  
Minimum Curvature

## Targets

### Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
NBU 1022-3L3DS PBHL - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,800.00	-45.53	83.30	604,624.42	2,579,227.21	39° 58' 29.910 N	109° 25' 58.710 W

## Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,000.00	2,000.00	Surface Casing	9.625	13.500

## Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,356.00	1,356.00	Green River		0.00	
4,301.10	4,299.00	Wasatch		0.00	
7,628.10	7,626.00	Mesaverde		0.00	
1,465.00	1,465.00	Bird's Nest		0.00	

**NBU 1022-3L3DS**

Pad: NBU 1022-3L

Surface: 1,561' FSL, 415' FWL (NW/4SW/4)

BHL: 1,517' FSL 497' FWL (NW/4SW/4)

Sec. 3 T10S R22E

Uintah, Utah

Mineral Lease: UTU 01191

**ONSHORE ORDER NO. 1**

***DRILLING PROGRAM***

1. – 2. **Estimated Tops of Important Geologic Markers:**  
**Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 – Surface	
Green River	1,356'	
Birds Nest	1,465'	Water
Mahogany	1,963'	Water
Wasatch	4,299'	Gas
Mesaverde	6,676'	Gas
MVU2	7,626'	Gas
MVL1	8,211'	Gas
TVD	8,800'	
TD	8,802'	

3. **Pressure Control Equipment** (Schematic Attached)

*Please refer to the attached Drilling Program.*

4. **Proposed Casing & Cementing Program:**

*Please refer to the attached Drilling Program.*

5. **Drilling Fluids Program:**

*Please refer to the attached Drilling Program.*

6. **Evaluation Program:**

*Please refer to the attached Drilling Program.*

7. **Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 8,802' TD, approximately equals 5,210 psi (calculated at 0.59 psi/foot).

Maximum anticipated surface pressure equals approximately 3,272 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. **Anticipated Starting Dates:**

*Drilling is planned to commence immediately upon approval of this application.*

9. **Variances:**

*Please refer to the attached Drilling Program.*

*Onshore Order #2 – Air Drilling Variance*

*Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2*

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

*This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.*

*The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.*

*More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.*

***Background***

*In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.*

*Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.*

*The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.*

*KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.*

#### ***Variance for BOPE Requirements***

*The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.*

#### ***Variance for Mud Material Requirements***

*Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.*

#### ***Variance for Special Drilling Operation (surface equipment placement) Requirements***

*Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.*

*Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.*

*Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.*

*Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.*

#### **Conclusion**

*The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.*

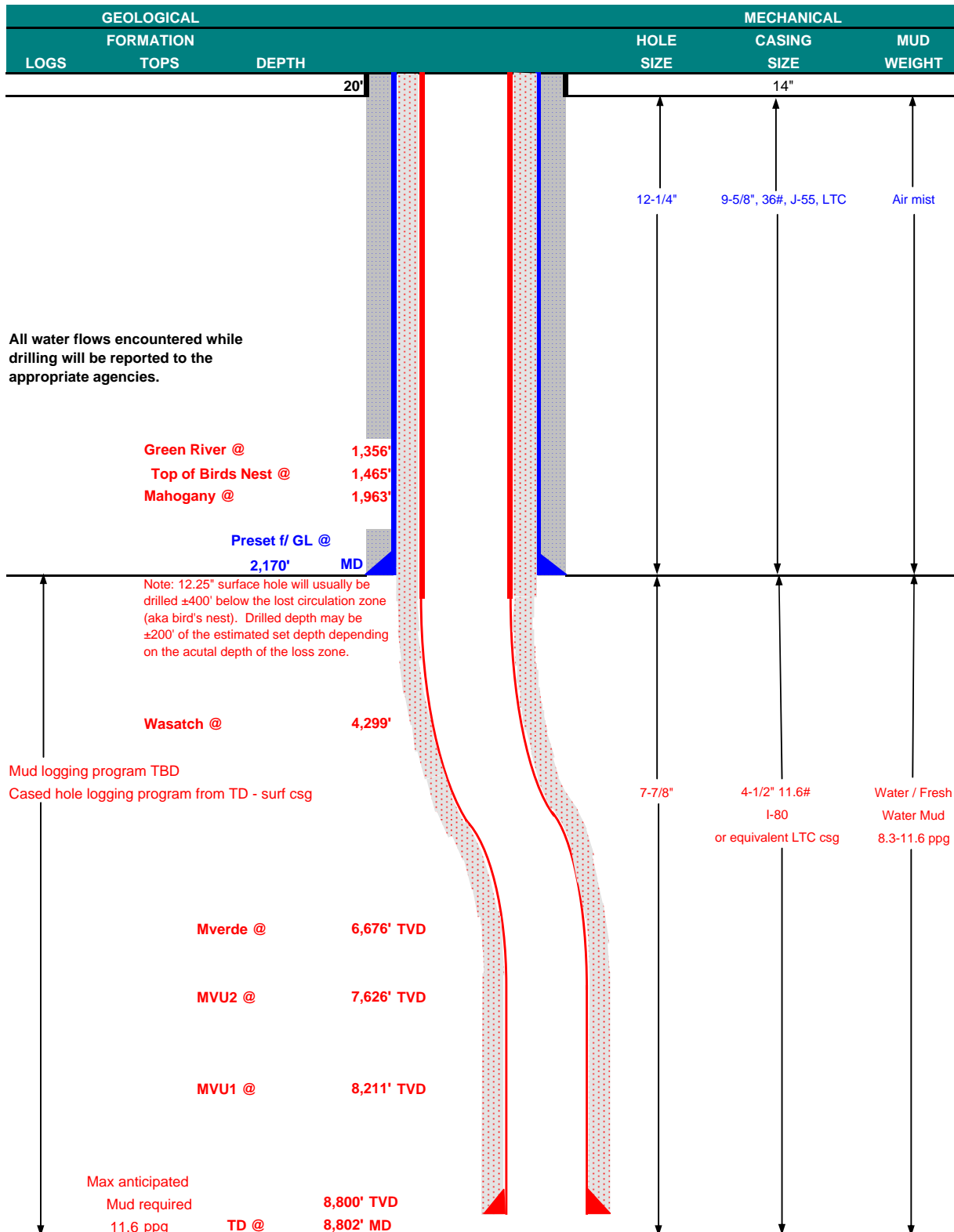
#### **10. Other Information:**

*Please refer to the attached Drilling Program.*



## KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP					DATE	June 22, 2009		
WELL NAME	NBU 1022-3L3DS					TD	8,800'	TVD	8,802' MD
FIELD	Natural Buttes		COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION		5,107'
SURFACE LOCATION	NW/4 SW/4 1,561' FSL		415' FWL		Sec 3	T 10S	R 22E		
	Latitude: 39.975067		Longitude: -109.433956		NAD 83				
BTM HOLE LOCATION	NW/4 SW/4 1,517' FSL		497' FWL		Sec 3	T 10S	R 22E		
	Latitude: 39.974942		Longitude: -109.433658		NAD 83				
OBJECTIVE ZONE(S)	Wasatch/Mesaverde								
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), BLM (Surface), Tri-County Health Dept.								





# KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

## CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'						
						3,520	2,020	453,000
SURFACE	9-5/8"	0 to 2,170	36.00	J-55	LTC	1.04	1.99	7.38
						7,780	6,350	201,000
PRODUCTION	4-1/2"	0 to 8,802	11.60	I-80	LTC	2.31	1.20	2.26

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 11.6 ppg)

0.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MASP 3,272 psi**

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 11.6 ppg)

0.59 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MABHP 5,210 psi**

## CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	215	60%	15.60	1.18
			+ 0.25 pps flocele				
Option 1							
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	380	0%	15.60	1.18
			+ 2% CaCl + 0.25 pps flocele				
			Premium cmt + 2% CaCl				
SURFACE			<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>				
Option 2							
	LEAD	1,670'	65/35 Poz + 6% Gel + 10 pps gilsonite	400	35%	12.60	1.81
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	180	35%	15.60	1.18
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	3,792'	Premium Lite II + 3% KCl + 0.25 pps	360	40%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	5,010'	50/50 Poz/G + 10% salt + 2% gel	1,230	40%	14.30	1.31
			+ 0.1% R-3				

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

\*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

## FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

## ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

John Huycke / Emile Goodwin

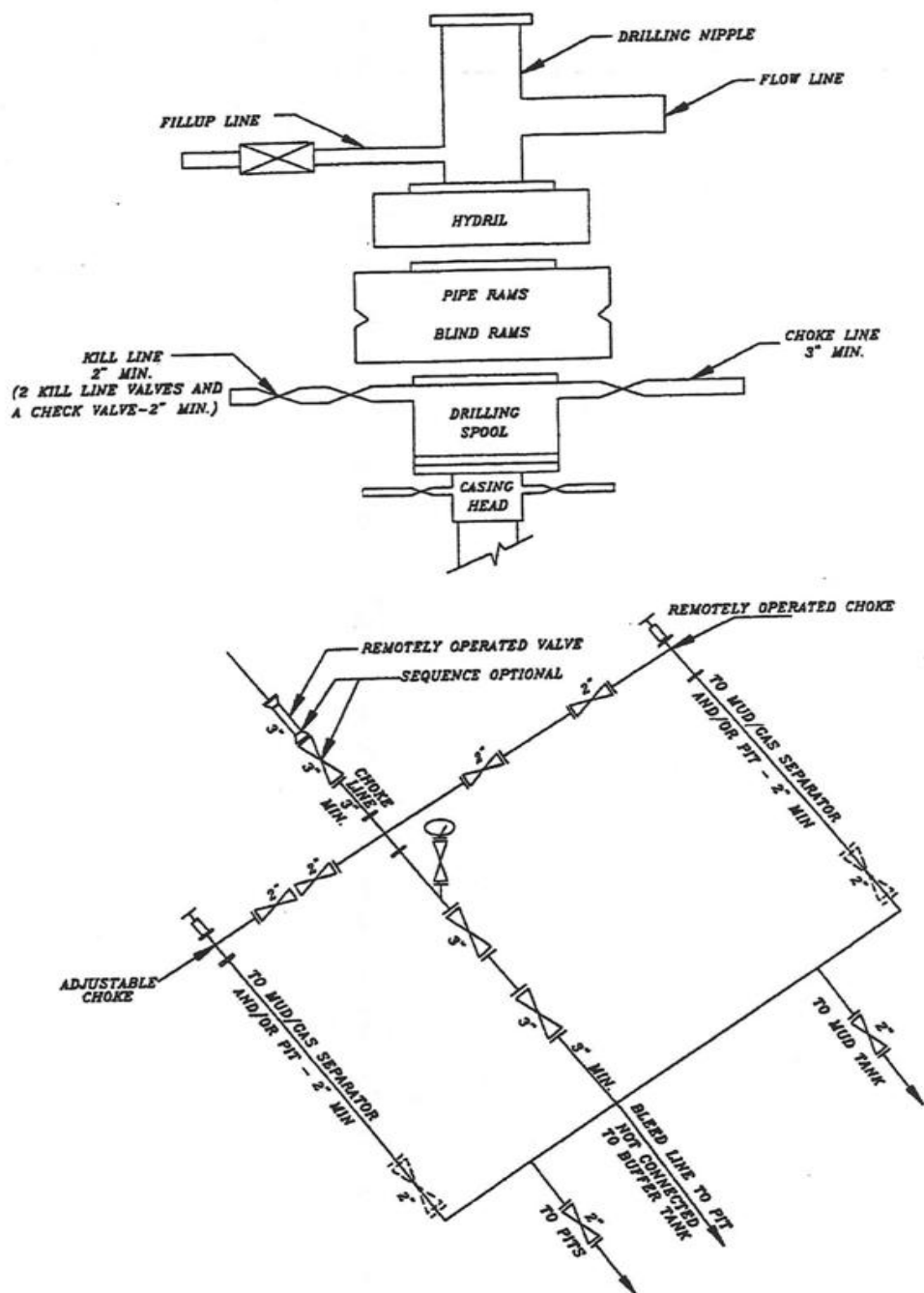
DATE:

DRILLING SUPERINTENDENT:

John Merkel / Lovel Young

DATE:

# EXHIBIT A NBU 1022-3L3DS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

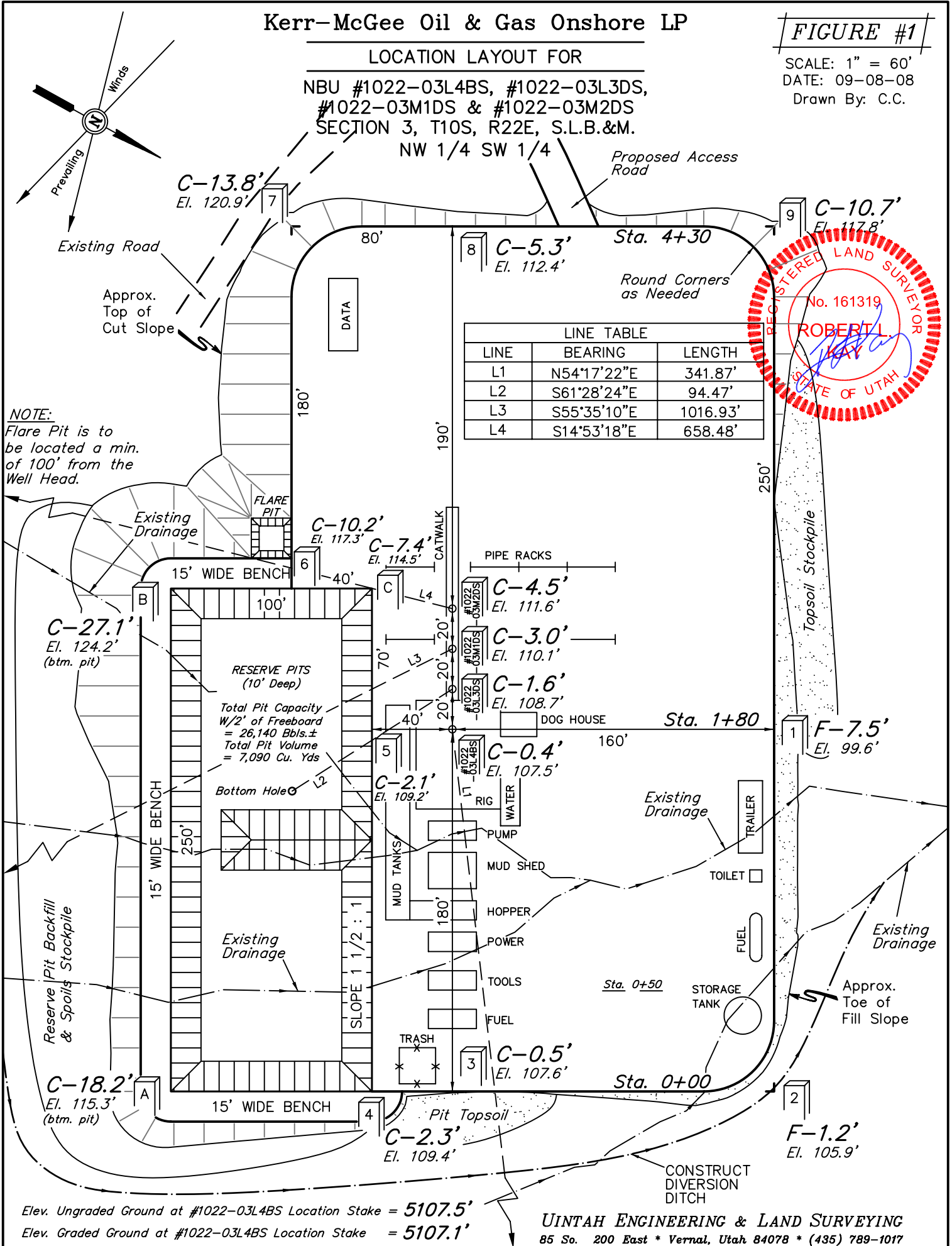
# Kerr-McGee Oil & Gas Onshore LP

## LOCATION LAYOUT FOR

NBU #1022-03L4BS, #1022-03L3DS,  
#1022-03M1DS & #1022-03M2DS  
SECTION 3, T10S, R22E, S.L.B.&M.  
NW 1/4 SW 1/4

**FIGURE #1**

SCALE: 1" = 60'  
DATE: 09-08-08  
Drawn By: C.C.

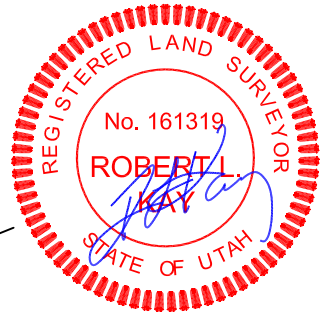


# Kerr-McGee Oil & Gas Onshore LP

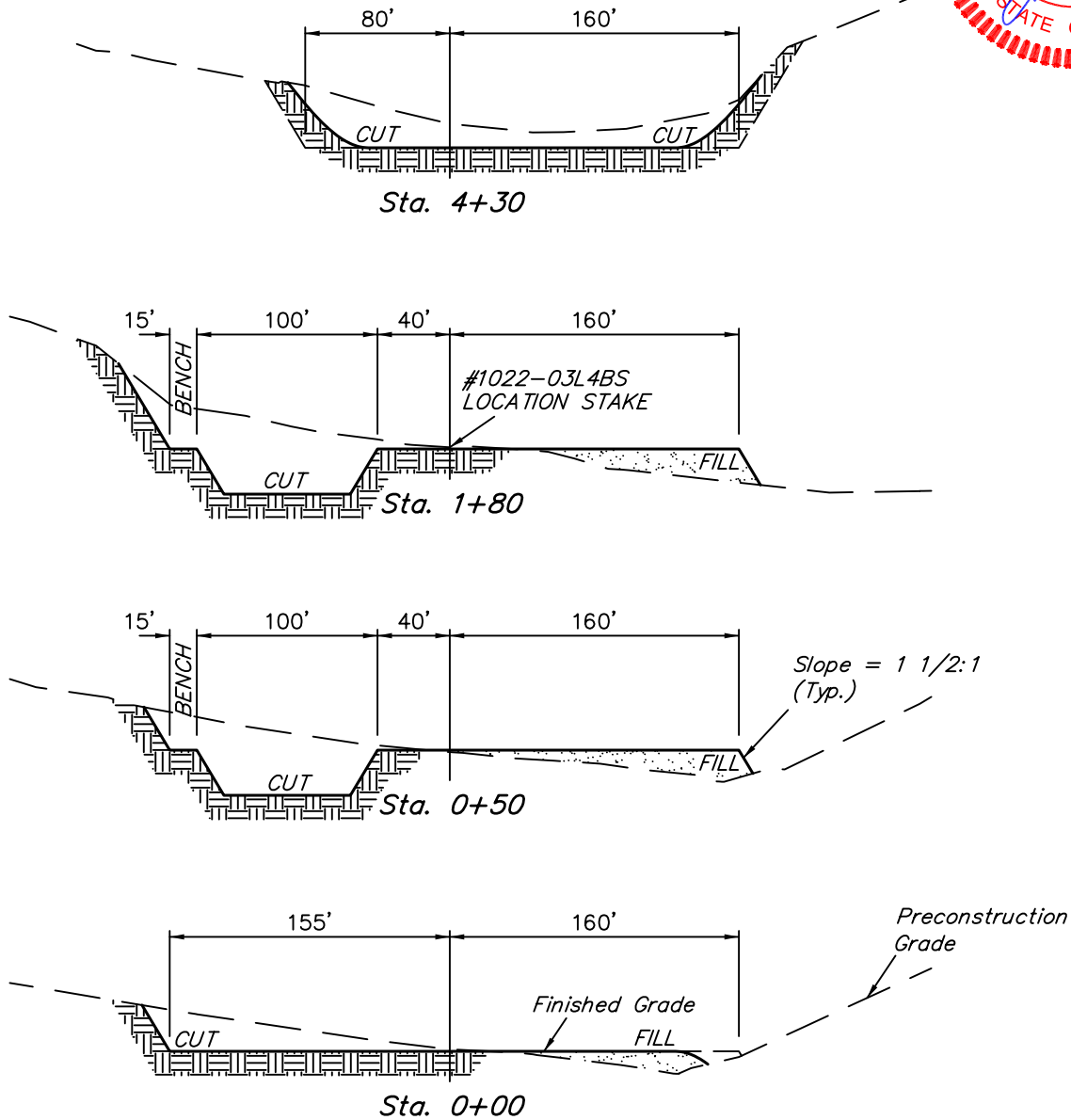
FIGURE #2

## TYPICAL CROSS SECTIONS FOR

NBU #1022-03L4BS, #1022-03L3DS,  
#1022-03M1DS & #1022-03M2DS  
SECTION 3, T10S, R22E, S.L.B.&M.  
NW 1/4 SW 1/4



1" = 40'  
X-Section  
Scale  
1" = 100'  
DATE: 09-08-08  
Drawn By: C.C.



### NOTE:

Topsoil should not be  
Stripped Below Finished  
Grade on Substructure Area.

### \* NOTE:

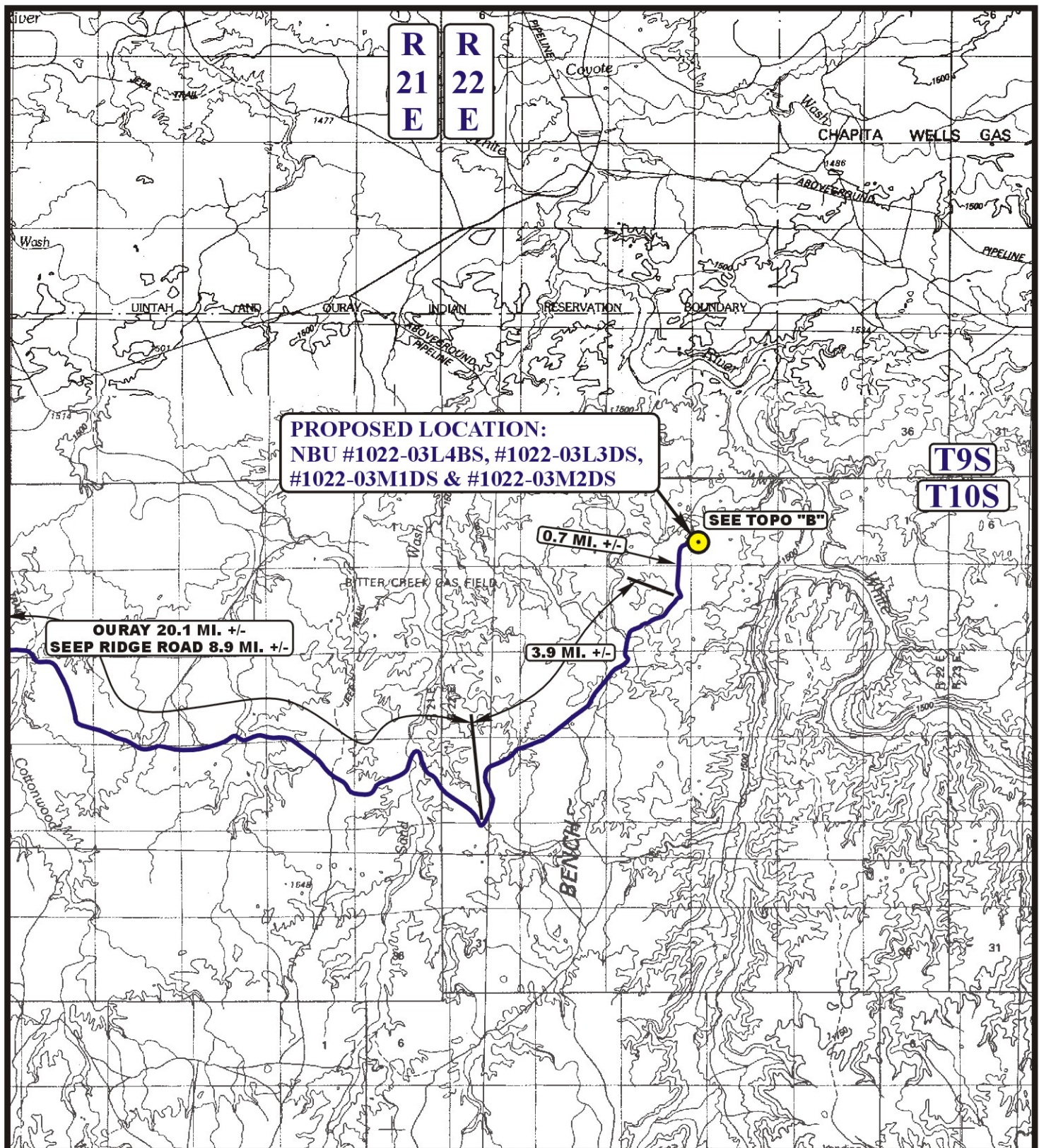
FILL QUANTITY INCLUDES  
5% FOR COMPACTION

### APPROXIMATE YARDAGES

(6") Topsoil Stripping = 2,800 Cu. Yds.  
Remaining Location = 27,690 Cu. Yds.  
**TOTAL CUT = 30,490 CU.YDS.**  
**FILL = 6,530 CU.YDS.**

EXCESS MATERIAL = 23,960 Cu. Yds.  
Topsoil & Pit Backfill = 6,350 Cu. Yds.  
(1/2 Pit Vol.)  
EXCESS UNBALANCE = 17,610 Cu. Yds.  
(After Interim Rehabilitation)

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017



**LEGEND:**

**PROPOSED LOCATION**

**Kerr-McGee Oil & Gas Onshore LP**

**NBU #1022-03L4BS, #1022-03L3DS,**  
**#1022-03M1DS & #1022-03M2DS**  
**SECTION 3, T10S, R22E, S.L.B.&M.**  
**NW 1/4 SW 1/4**



**Uintah Engineering & Land Surveying**  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAX (435) 789-1813

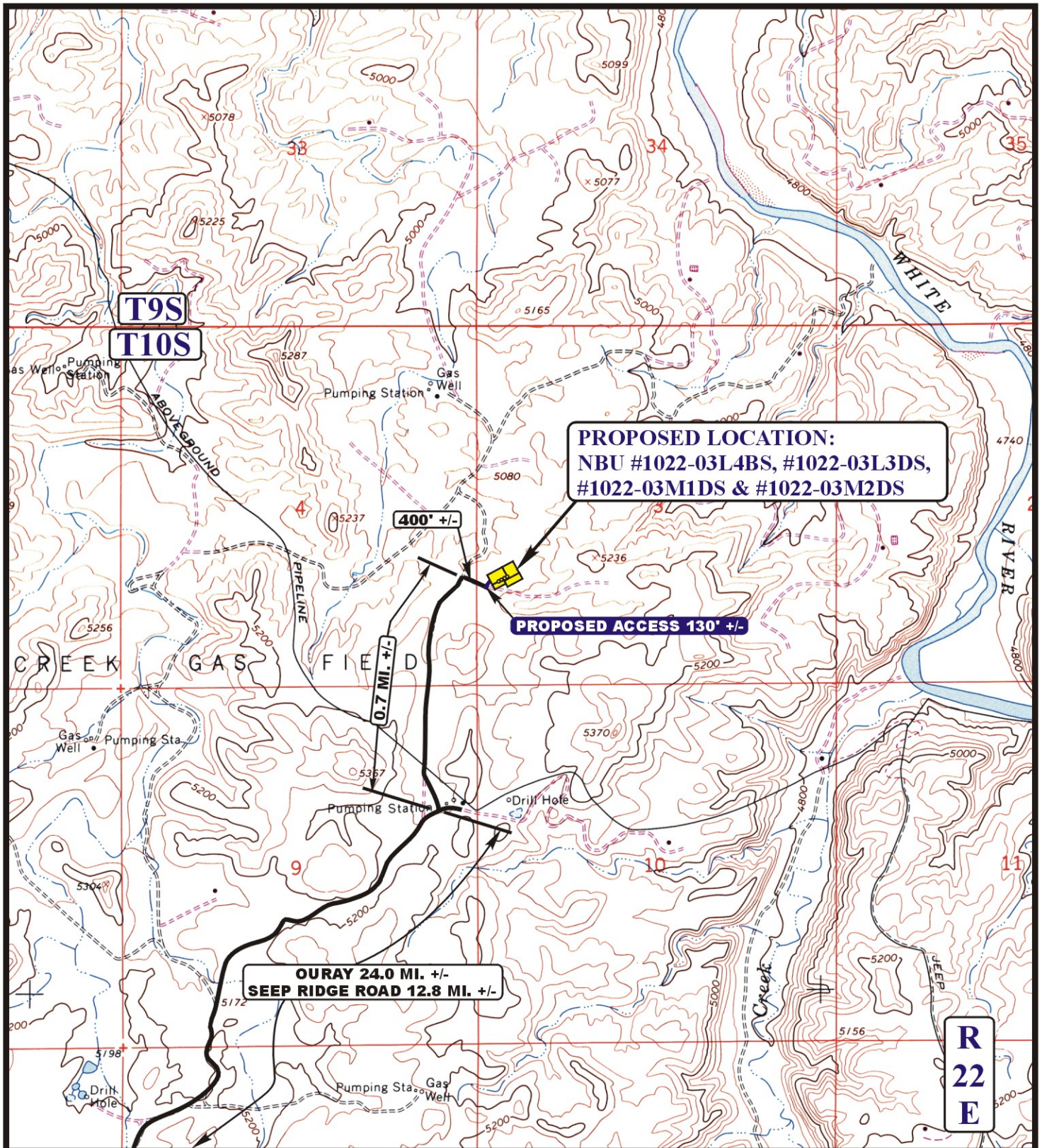


**TOPOGRAPHIC**  
**MAP**

**09 10 08**  
 MONTH DAY YEAR

SCALE: 1:100,000 DRAWN BY: J.H. REVISED: 00-00-00





**LEGEND:**

————— EXISTING ROAD  
- - - - - PROPOSED ACCESS ROAD

**Kerr-McGee Oil & Gas Onshore LP**

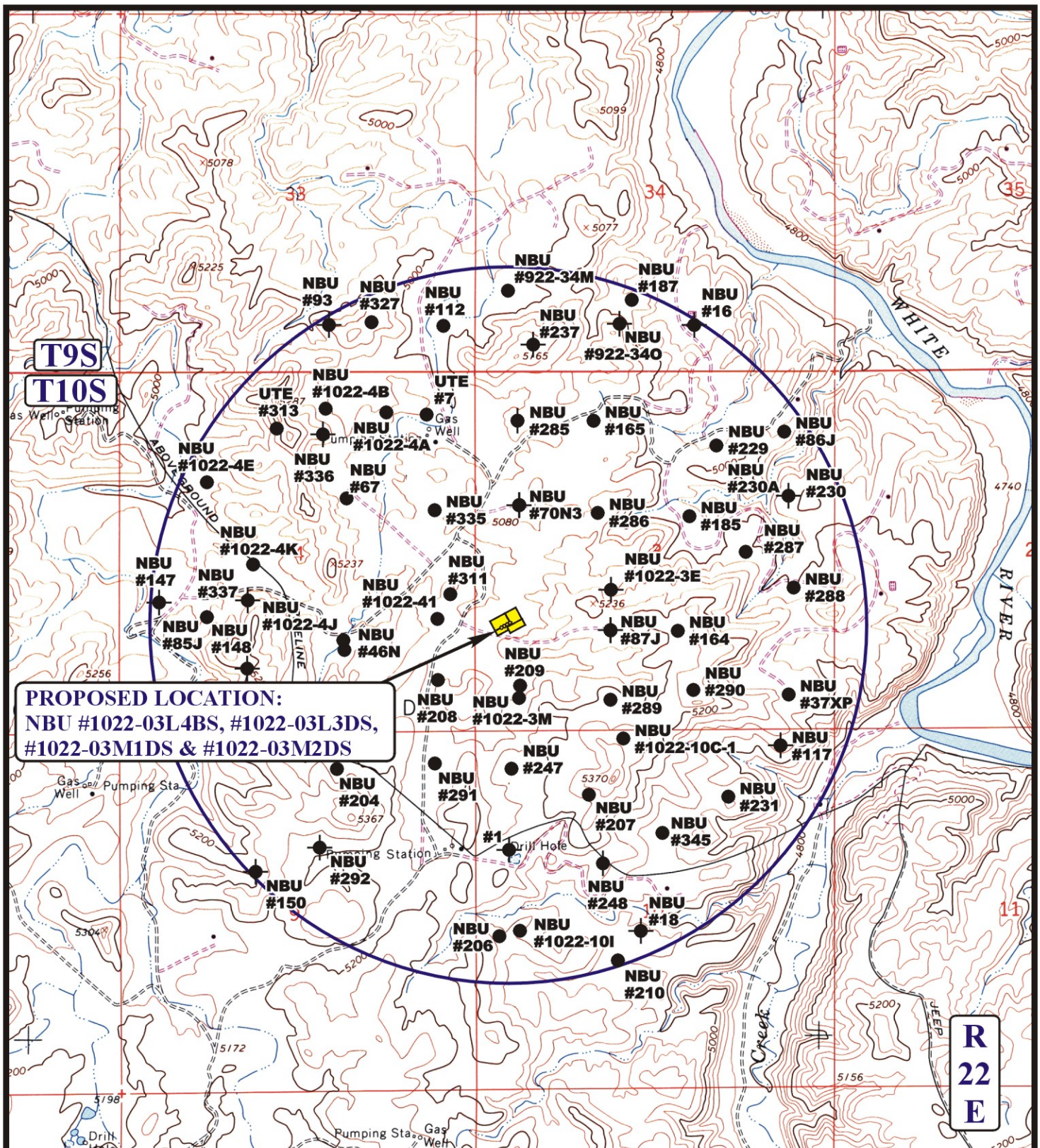
NBU #1022-03L4BS, #1022-03L3DS,  
#1022-03M1DS & #1022-03M2DS  
SECTION 3, T10S, R22E, S.L.B.&M.  
NW 1/4 SW 1/4

**U E I S**  
**Uintah Engineering & Land Surveying**  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813



**TOPOGRAPHIC** **09 10 08**  
**MAP** MONTH DAY YEAR  
SCALE: 1" = 2000' DRAWN BY: J.H. REVISED: 00-00-00

**B**  
**TOPO**



**LEGEND:**

- |                   |                         |
|-------------------|-------------------------|
| ○ DISPOSAL WELLS  | ○ WATER WELLS           |
| ● PRODUCING WELLS | ● ABANDONED WELLS       |
| ● SHUT IN WELLS   | ● TEMPORARILY ABANDONED |

**Kerr-McGee Oil & Gas Onshore LP**

NBU #1022-03L4BS, #1022-03L3DS,  
 #1022-03M1DS & #1022-03M2DS  
 SECTION 3, T10S, R22E, S.L.B.&M.  
 NW 1/4 SW 1/4

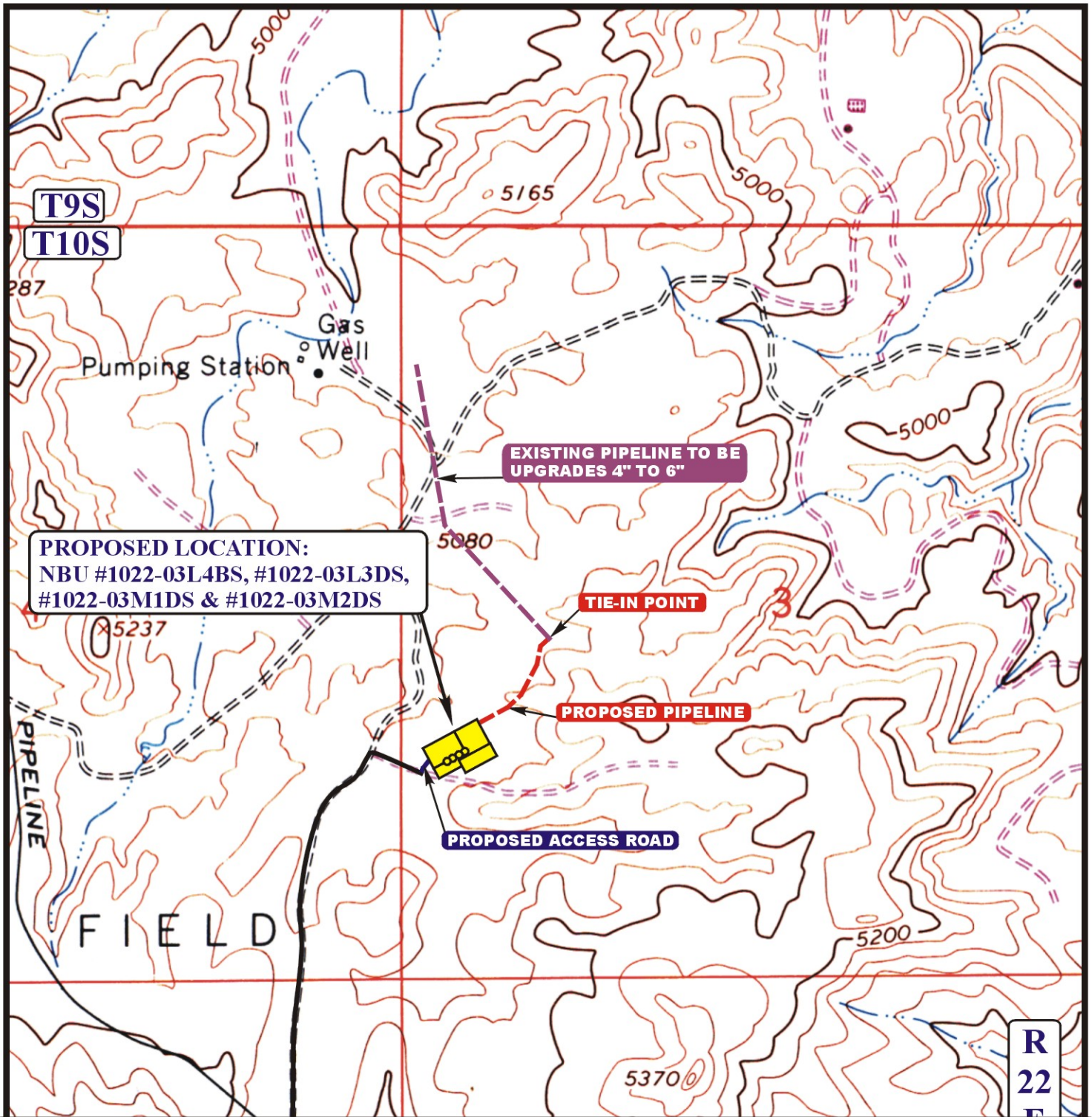


**Utah Engineering & Land Surveying**  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAX (435) 789-1813



**TOPOGRAPHIC MAP** 09 10 08  
 MONTH DAY YEAR  
 SCALE: 1" = 2000' DRAWN BY: J.H. REVISED: 00-00-00





**APPROXIMATE TOTAL PIPELINE DISTANCE = 790' +/-**

**APPROXIMATE TOTAL PIPELINE UPGRADE DISTANCE = 2,200' +/-**

**LEGEND:**

- PROPOSED ACCESS ROAD
- EXISTING PIPELINE
- PROPOSED PIPELINE
- EXISTING PIPELINE TO BE UPGRADED 4" TO 6"



**Utah Engineering & Land Surveying**  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAX (435) 789-1813



**Kerr-McGee Oil & Gas Onshore LP**

NBU #1022-03L4BS, #1022-03L3DS,  
 #1022-03M1DS & #1022-03M2DS  
 SECTION 3, T10S R22E, S.L.B.&M.  
 NW 1/4 SW 1/4

**TOPOGRAPHIC  
 MAP**

**09 10 08**  
 MONTH DAY YEAR

SCALE: 1" = 1000'

DRAWN BY: J.H.

REVISED: 00-00-00

**D  
 TOPO**

# Kerr-McGee Oil & Gas Onshore LP

NBU #1022-O3L4BS, #1022-03L3DS, #1022-03M1DS, & #1022-03M2DS

LOCATED IN UINTAH COUNTY, UTAH

SECTION 3, T10S, R22E, S.L.B.&M.

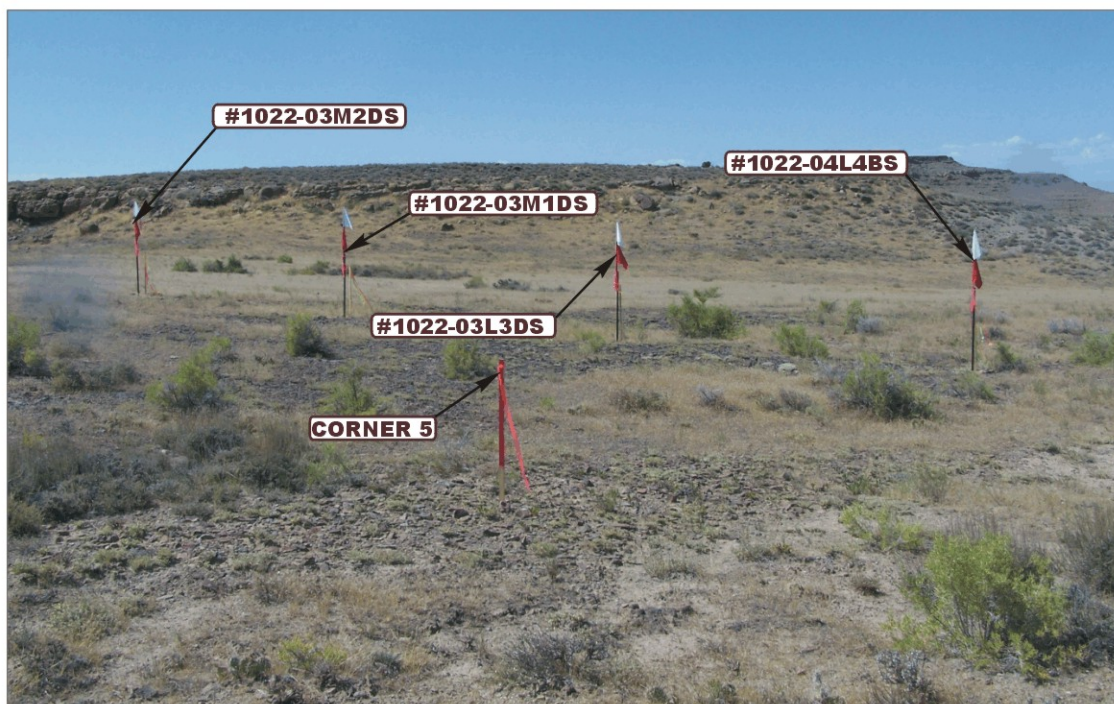


PHOTO: VIEW FROM CORNER 5 TO LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY



PHOTO: FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: NORTHEASTERLY



**UELS**

Uintah Engineering & Land Surveying

85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

LOCATION PHOTOS

09 10 08  
MONTH DAY YEAR

PHOTO

TAKEN BY: D.K.

DRAWN BY: J.H.

REVISED: 00-00-00

**Kerr-McGee Oil & Gas Onshore LP**  
**NBU #1022-O3L4BS, #1022-03L3DS, #1022-03M1DS & #1022-03M2DS**  
**PIPELINE ALIGNMENT**  
**LOCATED IN UINTAH COUNTY, UTAH**  
**SECTION 3, T10S, R22E, S.L.B.&M.**



**PHOTO: VIEW FROM TIE IN POINT**

**CAMERA ANGLE: SOUTHWESTERLY**



**PHOTO: VIEW OF PIPELINE ALIGNMENT**

**CAMERA ANGLE: SOUTHWESTERLY**



- Since 1964 -

**UELS**

Uintah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

**LOCATION PHOTOS**

**09 10 08**  
MONTH DAY YEAR

**PHOTO**

**TAKEN BY: D.K.**

**DRAWN BY: J.H.**

**REVISED: 00-00-00**

**NBU 1022-3L3DS**

Surface: 1,561' FSL 415' FWL (NW/4 SW/4)

BHL: 1,517' FSL 497' FWL (NW/4 SW/4)

**NBU 1022-3L4BS**

Surface: 1,571' FSL 432' FWL (NW/4 SW/4)

BHL: 1,774' FSL 712' FWL (NW/4 SW/4)

**NBU 1022-3M1DS**

Surface: 1,551' FSL 397' FWL (NW/4 SW/4)

BHL: 987' FSL 1,229' FWL (SW/4 SW/4)

**NBU 1022-3M2DS**

Surface: 1,541' FSL 379' FWL (NW/4 SW/4)

BHL: 907' FSL 541' FWL (SW/4 SW/4)

Pad: NBU 1022-3L

Sec. 3 T10S R22E

Uintah, Utah

Mineral Lease: UTU 01191

**ONSHORE ORDER NO. 1**

***MULTI-POINT SURFACE USE & OPERATIONS PLAN***

This Application for Permit to Drill (APD) is filed under the Notice of Staking (NOS) process as stated in Onshore Order No. 1 (OSO #1) and supporting Bureau of Land Management (BLM) documents. An NOS was submitted in November 2008 showing the surface locations in NW/4 SW/4 of Section 3 T10S R22E.

This Surface Use Plan of Operations (SUPO) or 13-point plan provides the site-specific information for the above-referenced wells. This information is to be incorporated by reference into the Master Development Plan (MDP) for Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee). The MDP is available upon request from the BLM-Vernal Field Office.

An on-site meeting was held on March 31, 2009. Present were:

- Verlyn Pindell, Dave Gordon – BLM;
- Kolby Kay – 609 Consulting, LLC
- Tony Kazeck, Raleen White, Grizz Oleen, Hal Blanchard and Charles Chase – Kerr-McGee.

**Directional Drilling:**

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, this well will be directionally drilled in order to access portions of our lease which are otherwise inaccessible due to topography.

**1. Existing Roads:**

- A) Refer to Topo Map A for directions to the location.
- B) Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

**2. Planned Access Roads:**

*See MDP for additional details on road construction.*

Approximately  $\pm 0.1$  ( $\pm 130'$ ) mile of new access road is proposed. Please refer to the attached Topo Map B. No pipelines will be crossed with the new construction.

*Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site and are typically shown on the attached Exhibits and Topo maps.*

**3. Location of Existing Wells Within a 1-Mile Radius:**

Please refer to Topo Map C.

**4. Location of Existing and Proposed Facilities:**

*See MDP for additional details on Existing and Proposed Facilities.*

**5. Location and Type of Water Supply:**

*See MDP for additional details on Location and Type of Water Supply.*

Water for drilling purposes will be obtained from Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, Application number 53617. Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

**6. Source of Construction Materials:**

*See MDP for additional details on Source of Construction Materials.*

**7. Methods of Handling Waste Materials:**

*See MDP for additional details on Methods of Handling Waste Materials.*

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E

NBU #159 in Sec. 35 T9S R21E

Ace Oilfield in Sec. 2 T6S R20E

MC&MC in Sec. 12 T6S R19E

Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

**8. Ancillary Facilities:**

*See MDP for additional details on Ancillary Facilities.*

None are anticipated.

9. **Well Site Layout:** (See Location Layout Diagram)  
*See MDP for additional details on Well Site Layout.*

All pits will be fenced according to the following minimum standards:

- Net wire (39-inch) will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.
- Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.
- All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

10. **Plans for Reclamation of the Surface:**  
*See MDP for additional details on Plans for Reclamation of the Surface.*

11. **Surface/Mineral Ownership:**  
United States of America  
Bureau of Land Management  
170 South 500 East  
Vernal, UT 84078  
(435)781-4400

12. **Other Information:**  
*See MDP for additional details on Other Information.*

**13. Lessee's or Operators' Representative & Certification:**

Kathy Schneebeck Dulnoan  
Regulatory Analyst  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6007

Tommy Thompson  
General Manager, Drilling  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720-929-6724


Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

  
Kathy Schneebeck Dulnoan

June 1, 2009  
Date



Kerr-McGee Oil & Gas Onshore LP  
1999 Broadway, Suite 3700  
Denver, CO 80205

November 3, 2008

Mrs. Diana Mason  
Division of Oil, Gas and Mining  
P.O. Box 145801  
Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11  
NBU 1022-3L3DS  
T10S R22E  
Section 3: NWSW  
NWSW 1561' FSL, 415' FWL (surface)  
NWSW 1517' FSL, 497' FWL (bottom hole)  
Uintah County, Utah

Dear Mrs. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to the Exception to Location and Siting of Wells.

- Kerr-McGee's NBU 1022-3L3DS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore

Therefore, based on the above stated information Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Jason K. Rayburn  
Landman

A handwritten signature in blue ink, appearing to read 'Jason K. Rayburn', is written over the typed name and title.

'APIWellNo:43047504910000'

CLASS I REVIEW OF KERR-MCGEE OIL AND GAS  
ONSHORE LP'S 73 PROPOSED NBU WELL LOCATIONS  
IN TOWNSHIP 10S, RANGE 22E  
UINTAH COUNTY, UTAH

By:

Jacki A. Montgomery

Prepared For:

Bureau of Land Management  
Vernal Field Office  
and  
School and Institutional  
Trust Lands Administration

Prepared Under Contract With:

Kerr-McGee Oil and Gas Onshore LP  
1368 South 1200 East  
Vernal, Utah 84078

Prepared By:

Montgomery Archaeological Consultants, Inc.  
P.O. Box 219  
Moab, Utah 84532

MOAC Report No. 08-268

October 16, 2008

United States Department of Interior (FLPMA)  
Permit No. 08-UT-60122

Public Lands Policy Coordination Office  
Archaeological Survey Permit No. 117

**IPC #08-228**

## **Paleontological Reconnaissance Survey Report**

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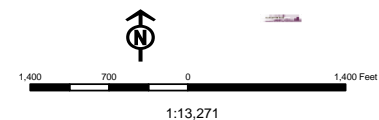
**Survey of Kerr McGee's Proposed Multi Well Pads & Pipeline  
Upgrades for "NBU #1022-03M2DS, 03M1DS, 03L3DS &  
03L4BS" & "NBU #1022-11K1T"  
(Sec. 3 & 11, T 10 S, R 22 E)**

Archy Bench  
Topographic Quadrangle  
Uintah County, Utah

October 10, 2008

Prepared by Stephen D. Sandau  
Paleontologist for  
Intermountain Paleo-Consulting  
P. O. Box 1125  
Vernal, Utah 84078

☐ Sections Wells Query Events



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, Utah 84145-0155

### IN REPLY REFER TO:

3160  
(UT-922)

June 26, 2009

### Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2009 Plan of Development Natural Buttes Unit Uintah  
County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2009 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-50491	NBU 1022-3L3DS Sec 03	T10S R22E 1561 FSL 0415 FWL
	BHL Sec 03	T10S R22E 1517 FSL 0497 FWL
43-047-50492	NBU 1022-3L4BS Sec 03	T10S R22E 1571 FSL 0432 FWL
	BHL Sec 03	T10S R22E 1774 FSL 0712 FWL
43-047-50493	NBU 1022-3M1DS Sec 03	T10S R22E 1551 FSL 0397 FWL
	BHL Sec 03	T10S R22E 0987 FSL 1229 FWL
43-047-50494	NBU 1022-3M2DS Sec 03	T10S R22E 1541 FSL 0379 FWL
	BHL Sec 03	T10S R22E 0907 FSL 0541 FWL
43-047-50507	NBU 922-33E2DS Sec 33	T09S R22E 1234 FNL 1257 FWL
	BHL Sec 33	T09S R22E 1904 FNL 0487 FWL
43-047-50508	NBU 922-33E3AS Sec 33	T09S R22E 1229 FNL 1276 FWL
	BHL Sec 33	T09S R22E 2278 FNL 0508 FWL
43-047-50509	NBU 922-33E3DS Sec 33	T09S R22E 1223 FNL 1295 FWL
	BHL Sec 33	T09S R22E 2617 FNL 0426 FWL
43-047-50510	NBU 922-33F3DS Sec 33	T09S R22E 1217 FNL 1315 FWL
	BHL Sec 33	T09S R22E 2513 FNL 1817 FWL

This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

bcc: File – Natural Buttes Unit  
Division of Oil Gas and Mining  
Central Files  
Agr. Sec. Chron  
Fluid Chron

MCoulthard:mc:6-26-09

# WORKSHEET

## APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 6/22/2009

**API NO. ASSIGNED:** 43047504910000

**WELL NAME:** NBU 1022-3L3DS

**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)

**PHONE NUMBER:** 720 929-6156

**CONTACT:** Danielle Piernot

**PROPOSED LOCATION:** NWSW 3 100S 220E

**Permit Tech Review:** ☒

**SURFACE:** 1561 FSL 0415 FWL

**Engineering Review:** ☒

**BOTTOM:** 1517 FSL 0497 FWL

**Geology Review:** ☒

**COUNTY:** UINTAH

**LATITUDE:** 39.97494

**LONGITUDE:** -109.43329

**UTM SURF EASTINGS:** 633790.00

**NORTHINGS:** 4425941.00

**FIELD NAME:** NATURAL BUTTES

**LEASE TYPE:** 1 - Federal

**LEASE NUMBER:** UTU 01191

**PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE

**SURFACE OWNER:** 1 - Federal

**COALBED METHANE:** NO

### RECEIVED AND/OR REVIEWED:

☒ **PLAT**

☒ **Bond:** FEDERAL - WYB000291

☐ **Potash**

☒ **Oil Shale 190-5**

☐ **Oil Shale 190-3**

☐ **Oil Shale 190-13**

☒ **Water Permit:** Permit #43-8496

☐ **RDCC Review:**

☐ **Fee Surface Agreement**

☒ **Intent to Commingle**

**Commingle Approved**

### LOCATION AND SITING:

☐ **R649-2-3.**

**Unit:** NATURAL BUTTES

☐ **R649-3-2. General**

☐ **R649-3-3. Exception**

☒ **Drilling Unit**

**Board Cause No:** Cause 173-14

**Effective Date:** 12/2/1999

**Siting:** 460' fr u bdry & uncomm. tract

☒ **R649-3-11. Directional Drill**

**Comments:** Presite Completed

**Stipulations:**  
3 - Commingle - ddoucet  
4 - Federal Approval - dmason  
15 - Directional - dmason  
17 - Oil Shale 190-5(b) - dmason



JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

### Permit To Drill

\*\*\*\*\*

**Well Name:** NBU 1022-3L3DS  
**API Well Number:** 43047504910000  
**Lease Number:** UTU 01191  
**Surface Owner:** FEDERAL  
**Approval Date:** 7/16/2009

#### Issued to:

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

#### Authority:

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

#### Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

#### Commingling:

In accordance with Board Cause No. 173-14 commingling the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

#### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### Conditions of Approval:

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

**Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available)

OR

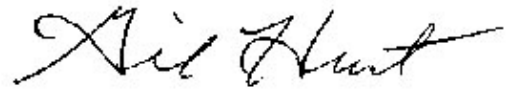
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <http://oilgas.ogm.utah.gov>

**Reporting Requirements:**

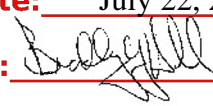
All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) – due within 5 days of spudding the well
- Monthly Status Report (Form 9) – due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) – due prior to implementation
- Written Notice of Emergency Changes (Form 9) – due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) – due prior to implementation
- Report of Water Encountered (Form 7) – due within 30 days after completion
- Well Completion Report (Form 8) – due within 30 days after completion or plugging

**Approved By:**

A handwritten signature in black ink, appearing to read "Gil Hunt", with a stylized, flowing script.

Gil Hunt  
Associate Director, Oil & Gas

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>			
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 01191			
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>			
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES			
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-3L3DS			
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1561 FSL 0415 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 03 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047504910000			
<b>PHONE NUMBER:</b> 720 929-6007 Ext		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES			
<b>COUNTY:</b> Uintah		<b>STATE:</b> UTAH			
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>					
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>				
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 7/16/2010  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION         </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER         </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input checked="" type="checkbox"/> APD EXTENSION          OTHER: _____       </td> </tr> </table>		<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> APD EXTENSION OTHER: _____
<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> APD EXTENSION OTHER: _____			
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.					
<b>Approved by the Utah Division of Oil, Gas and Mining</b>		<b>Date:</b> July 22, 2010 <b>By:</b> 			
<b>NAME (PLEASE PRINT)</b> Danielle Piernot	<b>PHONE NUMBER</b> 720 929-6156	<b>TITLE</b> Regulatory Analyst			
<b>SIGNATURE</b> N/A		<b>DATE</b> 7/14/2010			

**RECEIVED** July 14, 2010



## The Utah Division of Oil, Gas, and Mining

- State of Utah  
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

### Request for Permit Extension Validation Well Number 43047504910000

**API:** 43047504910000

**Well Name:** NBU 1022-3L3DS

**Location:** 1561 FSL 0415 FWL QTR NWSW SEC 03 TWP 100S RNG 220E MER S

**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date Original Permit Issued:** 7/16/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☐ Yes ☒ No
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- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

**Approved by the  
Utah Division of  
Oil, Gas and Mining**

**Signature:** Danielle Piernot

**Date:** 7/14/2010

**Title:** Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date:** July 22, 2010

**By:** 

**RECEIVED** July 14, 2010

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>			
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 01191			
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>			
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES			
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-3L3DS			
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1561 FSL 0415 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 03 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047504910000			
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES			
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>					
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>				
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 7/16/2011  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION         </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER         </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input checked="" type="checkbox"/> APD EXTENSION          OTHER: <span style="border: 1px solid black; display: inline-block; width: 100px; height: 1.2em; vertical-align: middle;"></span> </td> </tr> </table>		<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> APD EXTENSION OTHER: <span style="border: 1px solid black; display: inline-block; width: 100px; height: 1.2em; vertical-align: middle;"></span>
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<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b>  Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.					
<b>Approved by the Utah Division of Oil, Gas and Mining</b>  <b>Date:</b> 06/20/2011 <b>By:</b>					
<b>NAME (PLEASE PRINT)</b> Andy Lytle		<b>PHONE NUMBER</b> 720 929-6100			
<b>SIGNATURE</b> N/A		<b>TITLE</b> Regulatory Analyst			
<b>DATE</b> 6/13/2011					



## The Utah Division of Oil, Gas, and Mining

- State of Utah  
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

### Request for Permit Extension Validation Well Number 43047504910000

**API:** 43047504910000

**Well Name:** NBU 1022-3L3DS

**Location:** 1561 FSL 0415 FWL QTR NWSW SEC 03 TWP 100S RNG 220E MER S

**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date Original Permit Issued:** 7/16/2009

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- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

**Signature:** Andy Lytle

**Date:** 6/13/2011

**Title:** Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**RECEIVED** Jun. 13, 2011



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Green River District-Vernal Field Office

170 South 500 East

Vernal, UT 84078

(435) 781-4400 Fax: (435) 781-4410

<http://www.blm.gov/ut/st/en/fo/vernal.html>

**OCT 31 2011**



IN REPLY REFER TO:  
3160 (UTG011)

Julie Jacobson  
Kerr McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779

43 047 50491

Re: Request to Return APD  
Well No. NBU 1022-3L3DS  
NWSW, Sec. 3, T10S, R22E  
Uintah County, Utah  
Lease No. UTU-01191  
Natural Buttes Unit

Dear Ms. Jacobson:

The Application for Permit to Drill (APD) for the above referenced well received in this office on June 26, 2009, is being returned unapproved per a request to this office in an email message from Andy Lytle received on February 14, 2011. If you intend to drill at this location at a future date, a new Application for Permit to Drill must be submitted.

If you have any questions regarding APD processing, please contact Cindy Severson at (435) 781-4455.

Sincerely,

Jerry Kenczka  
Assistant Field Manager  
Lands & Mineral Resources

Enclosures

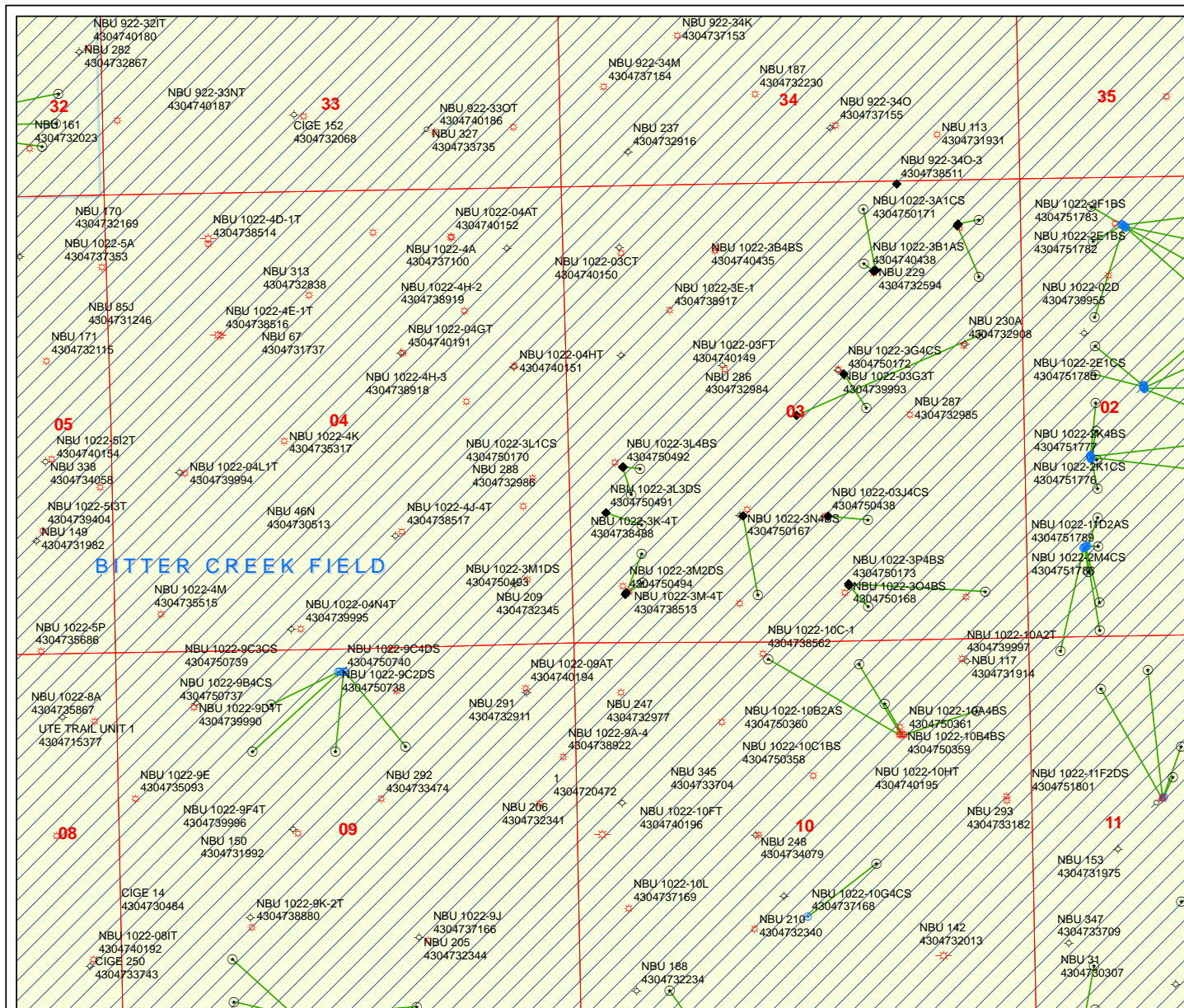
cc: UDOGM

**RECEIVED**

**NOV 07 2011**

**DIV. OF OIL, GAS & MINING**

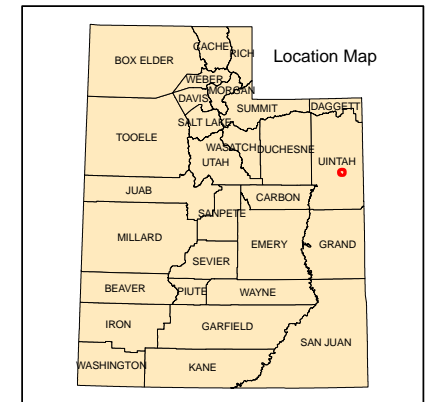
<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>			
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<b>10. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES			
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH			
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<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> The operator is requesting the approval of the following changes to the originally approved APD: 1. Surface & Bottom Hole Location Change (New Plat is Attached) / a. From = 1561 FSL/ 415 FWL To = 625 FSL/ 624 FWL / 2. Proposed Total Depth (New Drilling Program Attached) / 3. Surface Hole Size and Casing Grade (New Wellbore Diagram Attached) / 4. Updated Directional Drilling Survey Attached / 5. Surface Use Plan of Operation (Updated Plan Attached)					
<b>NAME (PLEASE PRINT)</b> Gina Becker		<b>PHONE NUMBER</b> 720 929-6086			
<b>SIGNATURE</b> N/A		<b>TITLE</b> Regulatory Analyst II			
<b>DATE</b> 5/21/2012		<b>DATE:</b> June 04, 2012 <b>By:</b>			



**API Number: 4304750491**  
**Well Name: NBU 1022-3L3DS**  
**Township T1.0 Range R2.2 Section 03**  
**Meridian: SLBM**  
**Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.**

Map Prepared:  
 Map Produced by Diana Mason

Units	Wells Query Status
ACTIVE	APD - Approved Permit
EXPLORATORY	DRL - Spudded (Drilling Commenced)
GAS STORAGE	GIW - Gas Injection
NF PP OIL	GS - Gas Storage
NF SECONDARY	LA - Location Abandoned
PI OIL	LOC - New Location
PP GAS	OPS - Operation Suspended
PP GEOTHERMAL	PA - Plugged Abandoned
PP OIL	PGW - Producing Gas Well
SECONDARY	POW - Producing Oil Well
TERMINATED	RET - Returned APD
Fields	SGW - Shut-in Gas Well
Unknown	SOW - Shut-in Oil Well
ABANDONED	TA - Temp. Abandoned
ACTIVE	TW - Test Well
COMBINED	WDW - Water Disposal
INACTIVE	WWI - Water Injection Well
STORAGE	WSW - Water Supply Well
TERMINATED	





**Kerr-McGee Oil & Gas Onshore, LP  
WELL PAD – NBU 1022-3M  
WELLS - NBU 1022-3M1DS, NBU 1022-3L3DS,  
NBU 1022-3M2DS & NBU 1022-3M4CS  
Section 3, T10S, R22E, S.L.B.&M.**

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 23.8 miles to the intersection of the Bitter Creek Road (County B Road 4120). Exit left and proceed in a southeasterly direction along the Bitter Creek Road approximately 4.0 miles to a Class D County Road to the northeast. Exit left and proceed in a northeasterly direction along the Class D County Road approximately 4.3 miles to a service road to the southeast. Exit right and proceed in a southeasterly direction along the service road approximately 0.1 miles to a second service road to the northeast. Exit left and proceed in a northeasterly direction approximately 0.2 miles to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 55.9 miles in a southerly direction.

**Kerr-McGee Oil & Gas Onshore. L.P.****NBU 1022-3L3DS**

Surface:	625 FSL / 624 FWL	SWSW
BHL:	1415 FSL / 825 FWL	NWSW

Section 3 T10S R22E

Unitah County, Utah  
Mineral Lease: UTU-01191

**ONSHORE ORDER NO. 1****DRILLING PROGRAM**

1. & 2. **Estimated Tops of Important Geologic Markers:**  
**Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,190'	
Birds Nest	1,447'	Water
Mahogany	1,924'	Water
Wasatch	4,285'	Gas
Mesaverde	6,649'	Gas
Sego	8,806'	Gas
Castlegate	8,953'	Gas
Blackhawk	9,382'	Gas
TVD	9,982'	
TD	10,104'	

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Drilling Program

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

2/15/2012

RECEIVED: May. 21, 2012

**7. Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 9982' TVD, approximately equals  
6,588 psi (0.66 psi/ft = actual bottomhole gradient)

---

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,438 psi (bottom hole pressure  
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

---

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-  
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

**8. Anticipated Starting Dates:**

Drilling is planned to commence immediately upon approval of this application.

**9. Variances:**

Please refer to the attached Drilling Program.  
Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

**Background**

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may

be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

2/15/2012

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

**Variance for BOPE Requirements**

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

**Variance for Mud Material Requirements**

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

**Variance for Special Drilling Operation (surface equipment placement) Requirements**

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

2/15/2012

RECEIVED: May. 21, 2012

**Variance for FIT Requirements**

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

**Conclusion**

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. **Other Information:**

Please refer to the attached Drilling Program.

2/15/2012

RECEIVED: May. 21, 2012



## KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP					DATE	February 15, 2012		
WELL NAME	NBU 1022-3L3DS					TD	9,982'	TVD	10,104' MD
FIELD	Natural Buttes	COUNTY		Uintah	STATE	Utah	FINISHED ELEVATION		5118.8
SURFACE LOCATION	SWSW	625 FSL	624 FWL	Sec 3	T 10S	R 22E			
	Latitude:	39.972491	Longitude:	-109.433170			NAD 83		
BTM HOLE LOCATION	NWSW	1415 FSL	825 FWL	Sec 3	T 10S	R 22E			
	Latitude:	39.974652	Longitude:	-109.432485			NAD 83		
OBJECTIVE ZONE(S)	BLACKHAWK (Part of the Mesaverde Group)								
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), BLM (Surface), UDOGM Tri-County Health Dept.								

GEOLOGICAL			MECHANICAL			
LOGS	TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT	
		40'		14"		
			12-1/4"	8-5/8", 28#, IJ-55, LTC	Air mist	
		200'				
All water flows encountered while drilling will be reported to the appropriate agencies.			11.00'	8-5/8", 28#, IJ-55, LTC	Air mist	
	Green River @	1,190'				
	Top of Birds Nest @	1,447'				
	Mahogany @	1,924'				
	Preset f/ GL @					
	2,370' TVD					
Note: 11" surface hole will usually be drilled ±400' below the lost circulation zone (aka bird's nest). Drilled depth may be ±200' of the estimated set depth depending on the actual depth of the loss zone.						
	Wasatch @	4,285'				
Mud logging program TBD Cased hole logging program from TD - surf csg			7-7/8"	4-1/2" 11.6# HCP-110 Ultra DQX/LTC csg	Water / Fresh Water Mud 8.3-13.0 ppg	
	Sego @	6,649' TVD				
	Castlegate @	8,806' TVD				
	Blackhawk @	8,953' TVD				
	Max anticipated Mud required 13.0 ppg	9,982' TVD TD @ 10,104' MD				



## KERR-McGEE OIL & GAS ONSHORE LP

### DRILLING PROGRAM

**CASING PROGRAM**

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	LTC	DQX
								TENSION	
CONDUCTOR	14"	0-40'							
						3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 2,370	28.00	IJ-55	LTC	2.27	1.69	5.99	N/A
						10,690	8,650	279,000	367,174
PRODUCTION	4-1/2"	0 to 5,000	11.60	HCP-110	DQX	1.19	1.28		3.91
	4-1/2"	5,000 to 10,104'	11.60	HCP-110	LTC	1.19	1.28	5.88	

**Surface Casing:**

(Burst Assumptions: TD = 13.0 ppg)

0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoys.Fact. of water)

**Production casing:**

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi)

0.66 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoys.Fact. of water)

**CEMENT PROGRAM**

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1			+ 0.25 pps flocele				
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE			NOTE: If well will circulate water to surface, option 2 will be utilized				
Option 2	LEAD	1,870'	65/35 Poz + 6% Gel + 10 pps gilsonite	170	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	3,784'	Premium Lite II +0.25 pps	300	35%	12.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	6,320'	50/50 Poz/G + 10% salt + 2% gel	1,490	35%	14.30	1.31
			+ 0.1% R-3				

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

\*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

**FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well. 1 centralizer on the first 3 joints and one every third joint thereafter.

**ADDITIONAL INFORMATION**

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

**DRILLING ENGINEER:**

Nick Spence / Danny Showers / Chad Loesel

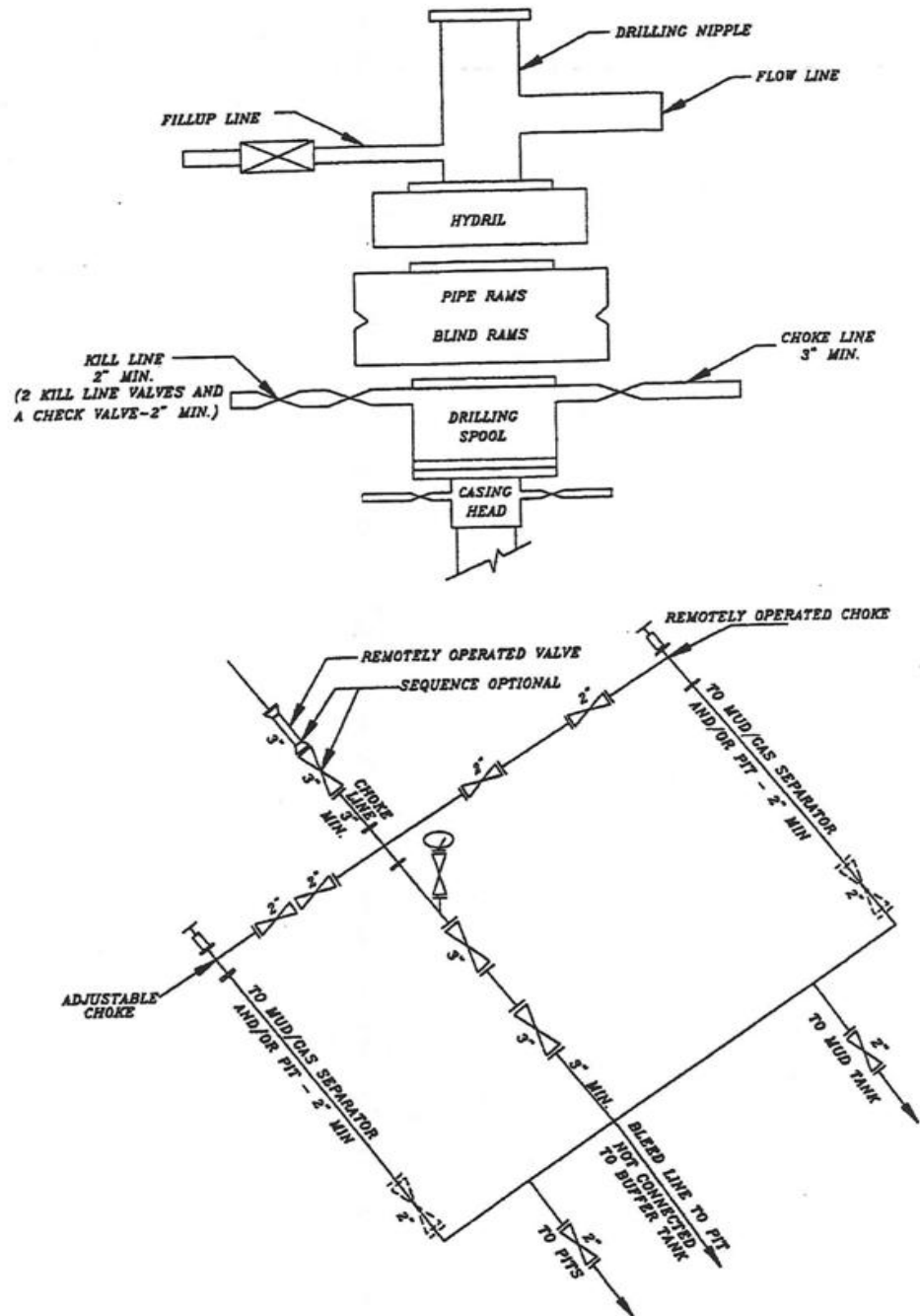
DATE:

**DRILLING SUPERINTENDENT:**

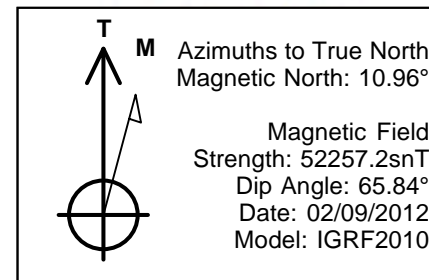
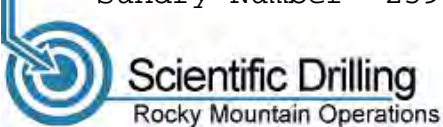
Kenny Gathings / Lovel Young

DATE:

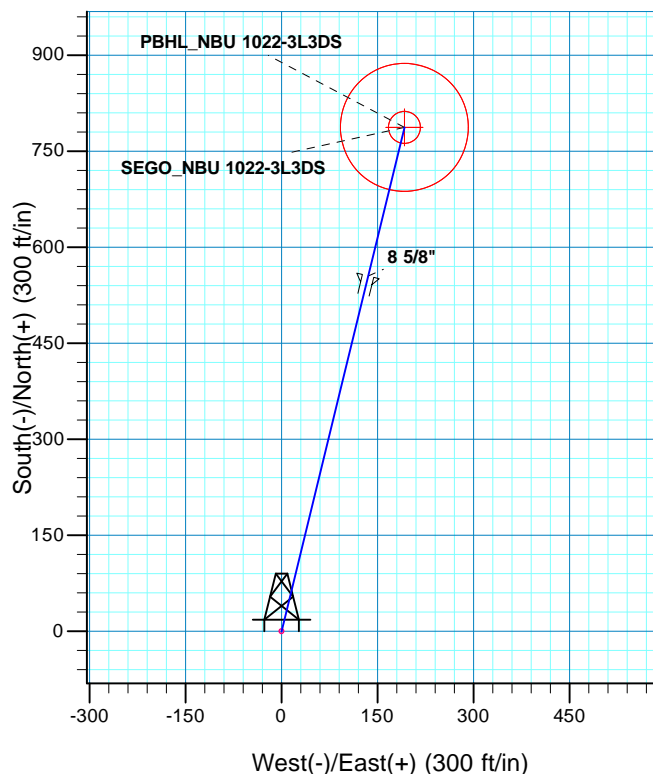
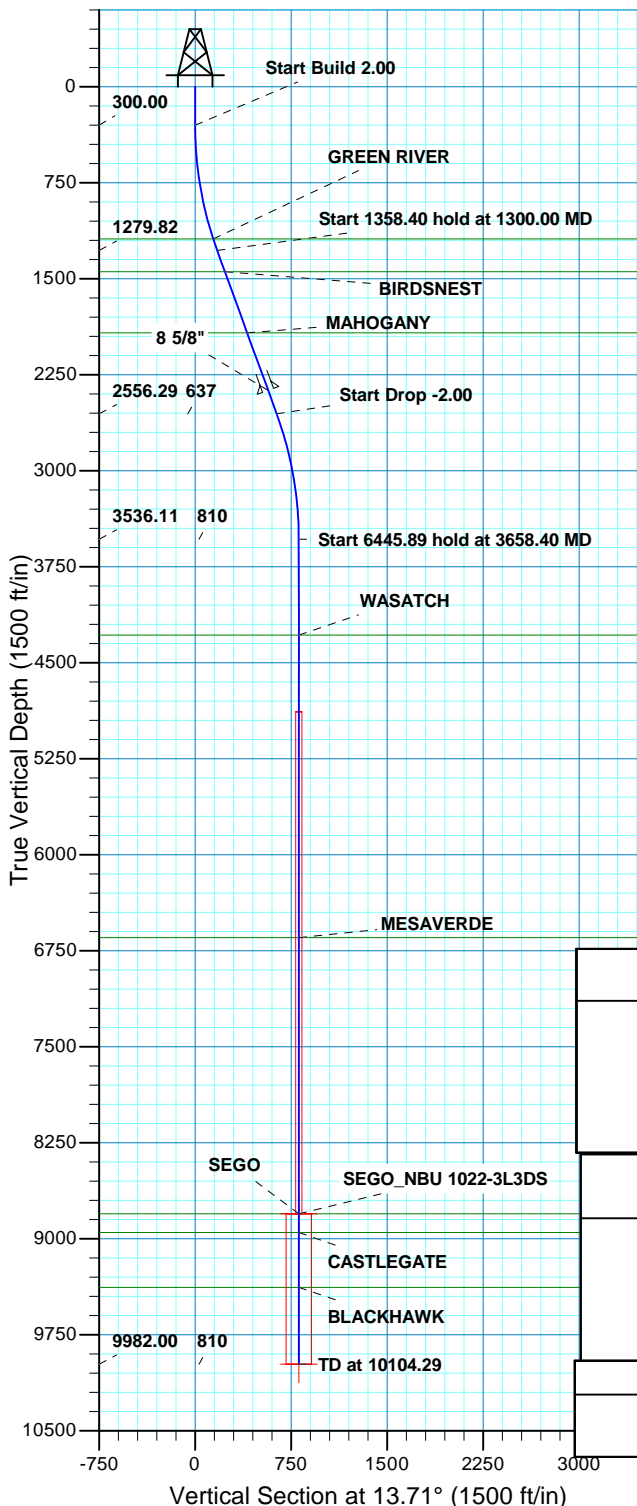
**EXHIBIT A**  
**NBU 1022-3L3DS**



**SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK**



WELL DETAILS: NBU 1022-3L3DS							
GL 5118 & KB 4 @ 5122.00ft (ASSUMED)							
	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
	0.00	0.00	14519900.12	2079597.27	39.972526	-109.432487	
DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SEGO	8806.00	787.07	191.95	14520690.44	2079775.35	39.974687	-109.431802
- plan hits target center							
PBHL	9982.00	787.07	191.95	14520690.44	2079775.35	39.974687	-109.431802
- plan hits target center							



SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	13.71	1279.82	167.85	40.94	2.00	13.71	172.77	
2658.40	20.00	13.71	2556.29	619.22	151.02	0.00	0.00	637.37	
3658.40	0.00	0.00	3536.11	787.07	191.95	2.00	180.00	810.14	
10104.29	0.00	0.00	9982.00	787.07	191.95	0.00	0.00	810.14	PBHL_NBU 1022-3L3DS
FORMATION TOP DETAILS									
TVDPath	MDPath	Formation							
1190.00	1204.98	GREEN RIVER							
1447.00	1477.91	BIRDSNEST							
1924.00	1985.53	MAHOGANY							
4285.00	4407.29	WASATCH							
6649.00	6771.29	MESAVERDE							
8806.00	8928.29	SEGO							
8953.00	9075.29	CASTLEGATE							
9382.00	9504.29	BLACKHAWK							

CASING DETAILS			
TVD	MD	Name	Size
2374.00	2464.41	8 5/8"	8.625

REC



# **US ROCKIES REGION PLANNING**

**UTAH - UTM (feet), NAD27, Zone 12N**

**NBU 1022-3M PAD**

**NBU 1022-3L3DS**

**OH**

**Plan: PLAN #1**

## **Standard Planning Report**

**09 February, 2012**





# SDI Planning Report



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3L3DS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5118 & KB 4 @ 5122.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5118 & KB 4 @ 5122.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-3M PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-3L3DS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

<b>Project</b>	UTAH - UTM (feet), NAD27, Zone 12N		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

<b>Site</b>	NBU 1022-3M PAD, SECTION 3 T10S R22E			
<b>Site Position:</b>		<b>Northing:</b>	14,519,908.94 usft	<b>Latitude:</b> 39.972550
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,079,601.59 usft	<b>Longitude:</b> -109.432471
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> 1.01 °

<b>Well</b>	NBU 1022-3L3DS, 625 FSL 624 FWL			
<b>Well Position</b>	<b>+N/-S</b>	-8.74 ft	<b>Northing:</b>	14,519,900.12 usft
	<b>+E/-W</b>	-4.48 ft	<b>Easting:</b>	2,079,597.26 usft
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	<b>Latitude:</b> 39.972526
				<b>Longitude:</b> -109.432487
				<b>Ground Level:</b> 5,118.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	02/09/12	10.96	65.84	52,257

<b>Design</b>	PLAN #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	13.71

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	20.00	13.71	1,279.82	167.85	40.94	2.00	2.00	0.00	13.71	
2,658.40	20.00	13.71	2,556.29	619.22	151.02	0.00	0.00	0.00	0.00	
3,658.40	0.00	0.00	3,536.11	787.07	191.95	2.00	-2.00	0.00	180.00	
10,104.29	0.00	0.00	9,982.00	787.07	191.95	0.00	0.00	0.00	0.00	PBHL_NBU 1022-3L3



**SDI**  
Planning Report



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3L3DS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5118 & KB 4 @ 5122.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5118 & KB 4 @ 5122.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-3M PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-3L3DS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
400.00	2.00	13.71	399.98	1.70	0.41	1.75	2.00	2.00	0.00
500.00	4.00	13.71	499.84	6.78	1.65	6.98	2.00	2.00	0.00
600.00	6.00	13.71	599.45	15.25	3.72	15.69	2.00	2.00	0.00
700.00	8.00	13.71	698.70	27.09	6.61	27.88	2.00	2.00	0.00
800.00	10.00	13.71	797.47	42.28	10.31	43.52	2.00	2.00	0.00
900.00	12.00	13.71	895.62	60.82	14.83	62.60	2.00	2.00	0.00
1,000.00	14.00	13.71	993.06	82.67	20.16	85.10	2.00	2.00	0.00
1,100.00	16.00	13.71	1,089.64	107.82	26.29	110.98	2.00	2.00	0.00
1,200.00	18.00	13.71	1,185.27	136.22	33.22	140.21	2.00	2.00	0.00
1,204.98	18.10	13.71	1,190.00	137.72	33.59	141.75	2.00	2.00	0.00
GREEN RIVER									
1,300.00	20.00	13.71	1,279.82	167.85	40.94	172.77	2.00	2.00	0.00
Start 1358.40 hold at 1300.00 MD									
1,400.00	20.00	13.71	1,373.78	201.08	49.04	206.97	0.00	0.00	0.00
1,477.91	20.00	13.71	1,447.00	226.97	55.35	233.62	0.00	0.00	0.00
BIRDSNEST									
1,500.00	20.00	13.71	1,467.75	234.30	57.14	241.17	0.00	0.00	0.00
1,600.00	20.00	13.71	1,561.72	267.53	65.25	275.37	0.00	0.00	0.00
1,700.00	20.00	13.71	1,655.69	300.76	73.35	309.58	0.00	0.00	0.00
1,800.00	20.00	13.71	1,749.66	333.99	81.46	343.78	0.00	0.00	0.00
1,900.00	20.00	13.71	1,843.63	367.22	89.56	377.98	0.00	0.00	0.00
1,985.53	20.00	13.71	1,924.00	395.64	96.49	407.23	0.00	0.00	0.00
MAHOGANY									
2,000.00	20.00	13.71	1,937.60	400.44	97.66	412.18	0.00	0.00	0.00
2,100.00	20.00	13.71	2,031.57	433.67	105.77	446.38	0.00	0.00	0.00
2,200.00	20.00	13.71	2,125.54	466.90	113.87	480.59	0.00	0.00	0.00
2,300.00	20.00	13.71	2,219.51	500.13	121.97	514.79	0.00	0.00	0.00
2,400.00	20.00	13.71	2,313.48	533.36	130.08	548.99	0.00	0.00	0.00
2,464.41	20.00	13.71	2,374.00	554.76	135.30	571.02	0.00	0.00	0.00
8 5/8"									
2,500.00	20.00	13.71	2,407.45	566.59	138.18	583.19	0.00	0.00	0.00
2,600.00	20.00	13.71	2,501.42	599.81	146.29	617.39	0.00	0.00	0.00
2,658.40	20.00	13.71	2,556.29	619.22	151.02	637.37	0.00	0.00	0.00
Start Drop -2.00									
2,700.00	19.17	13.71	2,595.49	632.77	154.32	651.31	2.00	-2.00	0.00
2,800.00	17.17	13.71	2,690.50	663.06	161.71	682.49	2.00	-2.00	0.00
2,900.00	15.17	13.71	2,786.54	690.11	168.31	710.33	2.00	-2.00	0.00
3,000.00	13.17	13.71	2,883.49	713.89	174.11	734.81	2.00	-2.00	0.00
3,100.00	11.17	13.71	2,981.24	734.36	179.10	755.89	2.00	-2.00	0.00
3,200.00	9.17	13.71	3,079.66	751.51	183.28	773.54	2.00	-2.00	0.00
3,300.00	7.17	13.71	3,178.64	765.31	186.65	787.75	2.00	-2.00	0.00
3,400.00	5.17	13.71	3,278.06	775.75	189.19	798.49	2.00	-2.00	0.00
3,500.00	3.17	13.71	3,377.79	782.81	190.92	805.76	2.00	-2.00	0.00
3,600.00	1.17	13.71	3,477.71	786.49	191.81	809.54	2.00	-2.00	0.00
3,658.40	0.00	0.00	3,536.11	787.07	191.95	810.14	2.00	-2.00	0.00
Start 6445.89 hold at 3658.40 MD									
3,700.00	0.00	0.00	3,577.71	787.07	191.95	810.14	0.00	0.00	0.00
3,800.00	0.00	0.00	3,677.71	787.07	191.95	810.14	0.00	0.00	0.00



**SDI**  
Planning Report



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3L3DS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5118 & KB 4 @ 5122.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5118 & KB 4 @ 5122.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-3M PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-3L3DS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,900.00	0.00	0.00	3,777.71	787.07	191.95	810.14	0.00	0.00	0.00
4,000.00	0.00	0.00	3,877.71	787.07	191.95	810.14	0.00	0.00	0.00
4,100.00	0.00	0.00	3,977.71	787.07	191.95	810.14	0.00	0.00	0.00
4,200.00	0.00	0.00	4,077.71	787.07	191.95	810.14	0.00	0.00	0.00
4,300.00	0.00	0.00	4,177.71	787.07	191.95	810.14	0.00	0.00	0.00
4,400.00	0.00	0.00	4,277.71	787.07	191.95	810.14	0.00	0.00	0.00
4,407.29	0.00	0.00	4,285.00	787.07	191.95	810.14	0.00	0.00	0.00
<b>WASATCH</b>									
4,500.00	0.00	0.00	4,377.71	787.07	191.95	810.14	0.00	0.00	0.00
4,600.00	0.00	0.00	4,477.71	787.07	191.95	810.14	0.00	0.00	0.00
4,700.00	0.00	0.00	4,577.71	787.07	191.95	810.14	0.00	0.00	0.00
4,800.00	0.00	0.00	4,677.71	787.07	191.95	810.14	0.00	0.00	0.00
4,900.00	0.00	0.00	4,777.71	787.07	191.95	810.14	0.00	0.00	0.00
5,000.00	0.00	0.00	4,877.71	787.07	191.95	810.14	0.00	0.00	0.00
5,100.00	0.00	0.00	4,977.71	787.07	191.95	810.14	0.00	0.00	0.00
5,200.00	0.00	0.00	5,077.71	787.07	191.95	810.14	0.00	0.00	0.00
5,300.00	0.00	0.00	5,177.71	787.07	191.95	810.14	0.00	0.00	0.00
5,400.00	0.00	0.00	5,277.71	787.07	191.95	810.14	0.00	0.00	0.00
5,500.00	0.00	0.00	5,377.71	787.07	191.95	810.14	0.00	0.00	0.00
5,600.00	0.00	0.00	5,477.71	787.07	191.95	810.14	0.00	0.00	0.00
5,700.00	0.00	0.00	5,577.71	787.07	191.95	810.14	0.00	0.00	0.00
5,800.00	0.00	0.00	5,677.71	787.07	191.95	810.14	0.00	0.00	0.00
5,900.00	0.00	0.00	5,777.71	787.07	191.95	810.14	0.00	0.00	0.00
6,000.00	0.00	0.00	5,877.71	787.07	191.95	810.14	0.00	0.00	0.00
6,100.00	0.00	0.00	5,977.71	787.07	191.95	810.14	0.00	0.00	0.00
6,200.00	0.00	0.00	6,077.71	787.07	191.95	810.14	0.00	0.00	0.00
6,300.00	0.00	0.00	6,177.71	787.07	191.95	810.14	0.00	0.00	0.00
6,400.00	0.00	0.00	6,277.71	787.07	191.95	810.14	0.00	0.00	0.00
6,500.00	0.00	0.00	6,377.71	787.07	191.95	810.14	0.00	0.00	0.00
6,600.00	0.00	0.00	6,477.71	787.07	191.95	810.14	0.00	0.00	0.00
6,700.00	0.00	0.00	6,577.71	787.07	191.95	810.14	0.00	0.00	0.00
6,771.29	0.00	0.00	6,649.00	787.07	191.95	810.14	0.00	0.00	0.00
<b>MESAVERDE</b>									
6,800.00	0.00	0.00	6,677.71	787.07	191.95	810.14	0.00	0.00	0.00
6,900.00	0.00	0.00	6,777.71	787.07	191.95	810.14	0.00	0.00	0.00
7,000.00	0.00	0.00	6,877.71	787.07	191.95	810.14	0.00	0.00	0.00
7,100.00	0.00	0.00	6,977.71	787.07	191.95	810.14	0.00	0.00	0.00
7,200.00	0.00	0.00	7,077.71	787.07	191.95	810.14	0.00	0.00	0.00
7,300.00	0.00	0.00	7,177.71	787.07	191.95	810.14	0.00	0.00	0.00
7,400.00	0.00	0.00	7,277.71	787.07	191.95	810.14	0.00	0.00	0.00
7,500.00	0.00	0.00	7,377.71	787.07	191.95	810.14	0.00	0.00	0.00
7,600.00	0.00	0.00	7,477.71	787.07	191.95	810.14	0.00	0.00	0.00
7,700.00	0.00	0.00	7,577.71	787.07	191.95	810.14	0.00	0.00	0.00
7,800.00	0.00	0.00	7,677.71	787.07	191.95	810.14	0.00	0.00	0.00
7,900.00	0.00	0.00	7,777.71	787.07	191.95	810.14	0.00	0.00	0.00
8,000.00	0.00	0.00	7,877.71	787.07	191.95	810.14	0.00	0.00	0.00
8,100.00	0.00	0.00	7,977.71	787.07	191.95	810.14	0.00	0.00	0.00
8,200.00	0.00	0.00	8,077.71	787.07	191.95	810.14	0.00	0.00	0.00
8,300.00	0.00	0.00	8,177.71	787.07	191.95	810.14	0.00	0.00	0.00
8,400.00	0.00	0.00	8,277.71	787.07	191.95	810.14	0.00	0.00	0.00
8,500.00	0.00	0.00	8,377.71	787.07	191.95	810.14	0.00	0.00	0.00
8,600.00	0.00	0.00	8,477.71	787.07	191.95	810.14	0.00	0.00	0.00
8,700.00	0.00	0.00	8,577.71	787.07	191.95	810.14	0.00	0.00	0.00
8,800.00	0.00	0.00	8,677.71	787.07	191.95	810.14	0.00	0.00	0.00



# SDI Planning Report



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3L3DS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5118 & KB 4 @ 5122.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5118 & KB 4 @ 5122.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-3M PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-3L3DS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,900.00	0.00	0.00	8,777.71	787.07	191.95	810.14	0.00	0.00	0.00
8,928.29	0.00	0.00	8,806.00	787.07	191.95	810.14	0.00	0.00	0.00
<b>SEGO - SEGO_NBU 1022-3L3DS</b>									
9,000.00	0.00	0.00	8,877.71	787.07	191.95	810.14	0.00	0.00	0.00
9,075.29	0.00	0.00	8,953.00	787.07	191.95	810.14	0.00	0.00	0.00
<b>CASTLEGATE</b>									
9,100.00	0.00	0.00	8,977.71	787.07	191.95	810.14	0.00	0.00	0.00
9,200.00	0.00	0.00	9,077.71	787.07	191.95	810.14	0.00	0.00	0.00
9,300.00	0.00	0.00	9,177.71	787.07	191.95	810.14	0.00	0.00	0.00
9,400.00	0.00	0.00	9,277.71	787.07	191.95	810.14	0.00	0.00	0.00
9,500.00	0.00	0.00	9,377.71	787.07	191.95	810.14	0.00	0.00	0.00
9,504.29	0.00	0.00	9,382.00	787.07	191.95	810.14	0.00	0.00	0.00
<b>BLACKHAWK</b>									
9,600.00	0.00	0.00	9,477.71	787.07	191.95	810.14	0.00	0.00	0.00
9,700.00	0.00	0.00	9,577.71	787.07	191.95	810.14	0.00	0.00	0.00
9,800.00	0.00	0.00	9,677.71	787.07	191.95	810.14	0.00	0.00	0.00
9,900.00	0.00	0.00	9,777.71	787.07	191.95	810.14	0.00	0.00	0.00
10,000.00	0.00	0.00	9,877.71	787.07	191.95	810.14	0.00	0.00	0.00
10,100.00	0.00	0.00	9,977.71	787.07	191.95	810.14	0.00	0.00	0.00
10,104.29	0.00	0.00	9,982.00	787.07	191.95	810.14	0.00	0.00	0.00
<b>TD at 10104.29 - PBHL_NBU 1022-3L3DS</b>									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SEGO_NBU 1022-3L3D - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,806.00	787.07	191.95	14,520,690.44	2,079,775.35	39.974687	-109.431802
PBHL_NBU 1022-3L3D - plan hits target center - Circle (radius 100.00)	0.00	0.00	9,982.00	787.07	191.95	14,520,690.44	2,079,775.35	39.974687	-109.431802

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,464.41	2,374.00	8 5/8"	8.625	11.000	



# SDI Planning Report



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-3L3DS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5118 & KB 4 @ 5122.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5118 & KB 4 @ 5122.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-3M PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-3L3DS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,204.98	1,190.00	GREEN RIVER			
1,477.91	1,447.00	BIRDSNEST			
1,985.53	1,924.00	MAHOGANY			
4,407.29	4,285.00	WASATCH			
6,771.29	6,649.00	MESAVERDE			
8,928.29	8,806.00	SEGO			
9,075.29	8,953.00	CASTLEGATE			
9,504.29	9,382.00	BLACKHAWK			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
300.00	300.00	0.00	0.00	Start Build 2.00	
1,300.00	1,279.82	167.85	40.94	Start 1358.40 hold at 1300.00 MD	
2,658.40	2,556.29	619.22	151.02	Start Drop -2.00	
3,658.40	3,536.11	787.07	191.95	Start 6445.89 hold at 3658.40 MD	
10,104.29	9,982.00	787.07	191.95	TD at 10104.29	

**Kerr-McGee Oil & Gas Onshore. L.P.****NBU 1022-3M PAD****API #4304750491****NBU 1022-3L3DS**

Surface:	625 FSL / 624 FWL	SWSW	Lot
BHL:	1415 FSL / 825 FWL	NWSW	Lot

**API #4304750493****NBU 1022-3M1DS**

Surface:	634 FSL / 629 FWL	SWSW	Lot
BHL:	1082 FSL / 818 FWL	SWSW	Lot

**API #4304750494****NBU 1022-3M2DS**

Surface:	616 FSL / 620 FWL	SWSW	Lot
BHL:	749 FSL / 824 FWL	SWSW	Lot

**API #****NBU 1022-3M4CS**

Surface:	607 FSL / 615 FWL	SWSW	Lot
BHL:	163 FSL / 812 FWL	SWSW	Lot

This Surface Use Plan of Operations (SUPO) or 13-point plan provides site-specific information for the above-referenced wells.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

An on-site meeting was held on December 6, 2011. Present were:

- David Gordon, Tyler Cox - BLM;
- Jacob Dunham - 609 Consulting;
- John Slaugh, Mitch Batty - Timberline Engineering & Land Surveying, Inc.; and
- Gina Becker, Charles Chase, Doyle Holmes, Casey McGee, Grizz Oleen, Sheila Wopsock - Kerr-McGee

**A. Existing Roads:**

Existing roads consist of county and improved/unimproved access roads (two-tracks). In accordance with Onshore Order #1, Kerr-McGee will, in accordance with BMPs, improve or maintain existing roads in a condition that is the same as or better than before operations began. New or reconstructed proposed access roads are discussed in Section B.

The existing roads will be maintained in a safe and usable condition. Maintenance for existing roads will continue until final abandonment and reclamation of well pads and/or other facilities, as applicable. Road maintenance will include, but is not limited to, blading, ditching, and/or culvert installation and cleanout. To ensure safe operating conditions, gravel surfacing will be performed where excessive rutting or erosion may occur. Dust control will be performed as necessary to ensure safe operating conditions.

Roads, gathering lines and electrical distribution lines will occupy common disturbance corridors where possible. Where available, roadways will be used as the staging area and working space for installation of gathering lines. All disturbances located in the same corridor will overlap each other to the maximum extent possible, while maintaining safe and sound construction and installation practices. Unless otherwise approved or requested in site specific documents, in no case will the maximum disturbance widths of the access road and utility corridors exceed the widths specified in Part D of this document.

Please refer to Topo B, for existing roads.

**B. New or Reconstructed Access Roads:**

All new or reconstructed roads will be located, designed, and maintained to meet the standards of the BLM. BMPs. Described in the BLM's Surface Operating Standards for Oil and Gas Exploration and Development, 4th Edition (Gold Book) (USDI and USDA, 2007) and/or BLM Manual Section 9113 (1985) will be considered in consultation with the BLM in the design, construction, improvement and maintenance of all new or reconstructed roads. If a new road would cross a water of the United States, Kerr-McGee will adhere to the requirements of applicable Nationwide Permits of the Department of Army Corps of Engineers.

Each new well pad or pad expansion may require construction of a new access road and/or de-commissioning of an older road. Plans, routes, and distances for new roads and road improvements are provided in design packages, exhibits and maps for a project. Project-specific maps are submitted to depict the locations of existing, proposed, and/or decommissioned and include the locations for supporting structures, including, but not limited to, culverts, bridges, low water crossings, range infrastructure, and haul routes, as per OSO 1. Designs for cuts and fills, including spoils source and storage areas, are provided with the road designs, as necessary.

Where safety objectives can be met. As applicable, Kerr-McGee may use unimproved and/or two-track roads for lease operations, to lessen total disturbance.

Road designs will be based on the road safety requirements, traffic characteristics, environmental conditions, and the vehicles the road is intended to carry. Generally, newly constructed unpaved lease roads will be crowned and ditched with the running surfaces of the roads approximately 12-18 feet wide and a total road corridor width not to exceed 45 feet, except where noted in the road design for a specific project. Maximum grade will generally not exceed 8%. Borrow ditches will be back sloped 3:1 or less. Construction BMPs will be employed to control onsite and offsite erosion.

Where topography would direct storm water runoff to an access road or well pad, drainage ditches or other common drainage control facilities, such as V- or wing-ditches, will be constructed to divert surface water runoff. Drainage features, including culverts, will be constructed or installed prior to commencing other operations, including drilling or facilities placement. Riprap will be placed at the inlet and outlet at the culvert(s), as necessary.

Prior to construction, new access road(s) will be staked according to the requirements of OSO 1. Construction activity will not be conducted using frozen or saturated materials or during periods when significant watershed damage (e.g. rutting, extensive sheet soil erosion, formation of rills/gullies, etc.) is likely to occur. Vegetative debris will not be placed in or under fill embankments.

New road maintenance will include, but is not limited to, blading, ditching, culvert installation and cleanout, gravel surfacing where excessive rutting or erosion may occur and dust control, as necessary to ensure safe operating conditions. All vehicular traffic, personnel movement, construction/restoration operations will be confined to the approved area and to existing roadways and/or access routes.

Snow removal will be conducted on an as-needed basis to accommodate safe travel. Snow removal will occur as necessary throughout the year, as will necessary drainage ditch construction. Removed snow may be stored on permitted well pads to reduce hauling distances and/or at the aerial extent of approved disturbance boundaries to facilitate snow removal for the remainder of the season.

If a county road crossing or encroachment permit is needed, it will be obtained prior to construction.

**There are no new proposed access roads associated with this well pad. Please refer to Topo B.**

**C. Location of Existing Wells:**

A) Refer to Topo Map C.

**D. Location of Existing and/or Proposed Facilities:**

This pad will expand the existing pad for the NBU 209 and the NBU 1022-3M-4T, both are producing gas wells according to Utah Division of Oil, Gas and Mining (UDOGM) records on February 14, 2012. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

Should the well(s) prove productive, production facilities will be installed on the disturbed portion of each well pad. A berm will be constructed completely around production components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will generally be constructed of compacted subsoil or corrugated metal, and will hold the capacity of the largest tank and have sufficient freeboard to accommodate a 25 year rainfall event. This includes pumping units. Aboveground structures constructed or installed onsite for 6 months or longer, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with the BLM (typically Shadow Gray). A production facility layout is provided as part of a project-specific APD, ROW or NOS submission.

**GAS GATHERING**

*Please refer to Exhibit A and Topo D2- Pad and Pipeline Detail.*

The gas gathering pipeline material: Steel line pipe. Surface = Bare pipe. Buried = Coated with fusion bonded epoxy coating (or equivalent). The total gas gathering pipeline distance from the meter to the tie in point is  $\pm 3,260'$  and the individual segments are broken up as follows:

**The following segments are "onlease", no ROW needed.**

- $\pm 255'$  (0.05 miles) – Section 3 T10S R22E (SW/4 SW/4) – On-lease UTU-01191, BLM surface, New 8" buried gas gathering pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 830'$  (0.16 miles) – Section 3 T10S R22E (SW/4 SW/4) – On-lease UTU-01191, BLM surface, New 8" buried gas gathering pipeline from the edge of the pad to tie-in to the proposed 16" gas gathering pipeline at the NBU 1022-3K intersection. Please refer to Exhibit A, Line 7.
- $\pm 1,640'$  (0.31 miles) – Section 3 T10S R22E (NW/4 SW/4) – On-lease UTU-01191, BLM surface, New 16" buried gas gathering pipeline from the NBU 1022-3K intersection with a short westerly bend into 10S, 22E, Section 4, then northeasterly to the NBU 1022-3L intersection in 10S, 22E, Section 3. This pipeline will be used concurrently with the NBU 1022-3O, NBU 1022-3J and NBU 1022-3K pads. Please refer to Exhibit A, Line 2.
- $\pm 535'$  (0.1 miles) – Section 3 T10S R22E (NW/4 SW/4) – On-lease UTU-01191, BLM surface, New 16" buried gas gathering pipeline from the NBU 1022-3L intersection to tie-in to the approved 16" gas pipeline located in 10S, 22E, Section 4. This pipeline will be used concurrently with the NBU 1022-3O, NBU 1022-3J, NBU 1022-3K and NBU 1022-3L pads. Please refer to Exhibit A, Line 1.

**LIQUID GATHERING**

*Please refer to Exhibit B and Topo D2- Pad and Pipeline Detail.*

The total liquid gathering pipeline distance from the separator to the tie in point is  $\pm 3,260'$  and the individual segments are broken up as follows:

**The following segments are "onlease", no ROW needed.**

- $\pm 255'$  (0.05 miles) – Section 3 T10S R22E (SW/4 SW/4) – On-lease UTU-01191, BLM surface, New 6" buried liquid gathering pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 830'$  (0.16 miles) – Section 3 T10S R22E (SW/4 SW/4) – On-lease UTU-01191, BLM surface, New 6" buried liquid gathering pipeline from the edge of the pad to the NBU 1022-3K intersection. Please refer to Exhibit B, Line 7.

- ±1,640' (0.31 miles) – Section 3 T10S R22E (SW/4 SW/4) – On-lease UTU-01191, BLM surface, New 6" buried liquid gathering pipeline from the NBU 1022-3K intersection with a short westerly bend into 10S, 22E, Section 4, then northeasterly to tie-in to the NBU 1022-3L intersection in 10S, 22E, Section 3. This pipeline will be used concurrently with the NBU 1022-3O, NBU 1022-3J and NBU 1022-3K pads. Please refer to Exhibit B, Line 2.
- ±535' (0.1 miles) – Section 3 T10S R22E (NW/4 SW/4) – On-lease UTU-01191, BLM surface, New 6" buried liquid gathering pipeline from the NBU 1022-3L intersection to tie-in to the approved liquid pipeline located in 10S, 22E, Section 4. This pipeline will be used concurrently with the NBU 1022-3O, NBU 1022-3J, NBU 1022-3K and NBU 1022-3L pads. Please refer to Exhibit B, Line 1.

### **Pipeline Gathering Construction**

Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee. Gas gathering pipeline(s), gas lift, or liquids pipelines may be constructed to lie on the surface or be buried. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. The area of disturbance during construction from the edge of road or well pad will typically be 30' in width. Where pipelines run cross country, the width of disturbance will typically be 45 ft for buried lines and 30 ft for surface lines. In addition, Kerr-McGee requests for a permanent 30' disturbance width that will be maintained for the portion adjacent to the road. The need for the 30' permanent disturbance width is for maintenance and repairs. Cross country permanent disturbance width also are required to be 30ft.

Above-ground installation will generally not require clearing of vegetation or blading of the surface, except where safety considerations necessitate earthwork. In some surface pipeline installation instances pipe cannot be constructed where it will lay. In these cases where an above-ground pipeline is constructed parallel and adjacent to a road, it will be welded/fused on the road and then lifted from the road to the pipeline route. In other cases where a pipeline route is not parallel and adjacent to a road (cross-country between sites), it will be welded/fused in place at a well pad, access road, or designated work area and pulled between connection locations with a suitable piece of equipment.

Buried pipelines will generally be installed parallel and adjacent to existing and/or newly constructed roads and within the permitted disturbance corridor. Buried pipelines may vary from 2 inches (typically fuel gas lines) to 24 inches (typically transportation lines) in diameter, but 6 to 16 inches is typical for a buried gas line. The diameter of liquids pipelines may vary from 2 inches to 12 inches, but 6 inches is the typical diameter. Gas lift lines may vary from 2 to 12 inches in diameter, but 6-inch diameter pipes are generally used for gas lift. If two or more pipelines are present (gas gathering, gas lift, and fluids), they will share a common trench where possible.

Typically, to install a buried pipeline, topsoil will be removed, windrowed and placed on the non-working side of the route for later reclamation. Because working room is limited, the spoil may be spread out across the working side and construction will take place on the spoil. The working side of the corridor will be used for pipe stringing, bending, welding and equipment travel. Small areas on the working side displaying ruts or uneven ground will be groomed to facilitate the safe passage of equipment. After the pipelines are installed, spoil will be placed back into the trench, and the topsoil will be redistributed over the disturbed corridor prior to final reclamation. Typical depth of the trench will be 6 feet, but depths may vary according to site-specific conditions (presence of bedrock, etc.). The proposed trench width for the pipeline would range from 18-48 inches.

The pipeline will be welded along the proposed route and lowered into place. Trenching equipment will cut through the soil or into the bedrock and create good backfill, eliminating the need to remove large rocks. The proposed buried pipeline will be visually and radiographically inspected and the entire pipeline will be pneumatically or hydrostatically tested before being placed into service. Routine vehicle traffic will be prevented from using pipeline routes as travel ways by posting signs at the route's intersection with an access road.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

If pipelines or roads encounter a drainage that could be subject to flooding or surface water during extreme precipitation events, Kerr-McGee will apply all applicable Army Corps mandates as well as the BLM's Hydraulic Considerations for Pipeline Crossings of Stream Channels (BLM Technical Note 423, April 2007). In addition, all stream and drainage crossings will be evaluated to determine the need for stream alteration permits from the State of Utah Division of Water Rights and if necessary, required permits will be secured. Similarly, where a road or pipeline crossing exists the pipe will be butt welded and buried to a depth between 24 and 48 inches or more. Dirt roads will be cut and restored to a condition equivalent to the existing condition. All Uintah County road encroachment and crossing permits, where applicable, will be obtained prior to crossing construction. In no case will pressure testing of pipelines result in discharge of liquids to the surface.

Pipeline signs will be installed along the route to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves and lateral T's will be installed at various locations for production integrity and safety purposes.

Upon completion of the proposed buried pipeline, the entire area of disturbance will be reclaimed to the standards proposed in the Green River District Reclamation Guidelines. Please refer to section J for more details regarding final reclamation.

When no longer deemed necessary by the operator, Kerr-McGee or it's successor will consult with the BLM, Vernal Field Office before terminating of the use of the pipeline(s).

#### **The Anadarko Completions Transportation System (ACTS) information:**

Please refer to Exhibit C for ACTs Lines

Kerr-McGee will use either a closed loop drilling system that will require one pit and one storage area to be constructed on the drilling pad or a traditional drilling operation with one pit. The storage area will be used to contain only the de-watered drill cuttings and will be lined and reclaimed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit is lined and will be used for the wells drilled on the pad or used as part of our Anadarko Completions Transportation (ACTS) system which is discussed in more detail below. Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completion pit.

If Kerr-McGee does not use a closed loop system, it will construct a drilling reserve pit to contain drill cuttings and for use in completion operations. Depending on the location of the pit, its relation to future drilling locations, the reserve/completion pit will be utilized for the completion of the wells on that pad and/or be used as part of our ACTS system.

Kerr-McGee will use ACTS to optimize the completion processes for multiple pads across the project area which may include up to a section of development. ACTS will facilitate management of frac fluids by utilizing existing reserve pits and temporary, surface-laid aluminum liquids transfer lines between frac locations. The pit will be refurbished as follows when a traditional drill pit is used: mix and pile up drill cuttings with dry dirt, bury the original liner in the pit, walk bottom of pit with cat. Kerr-McGee will reline the pit with a 30 mil liner and double felt padding. The refurbished pit will be the same size or smaller as specified in the originally approved ROW/APD. The pit refurb will be done in a normal procedure and there will be no modification to the pit.

All four sides of the completions pit will be fenced in according to standard pit fencing procedures. Netting will be installed over all pits.

Any hydrocarbons collected will be treated and sold at approved sales facilities. A loading rack with drip containment will also be installed where water trucks would unload and load to prevent damage caused from pulling hoses in and out of the pit.

ACTS will require temporarily laying multiple 6" aluminum water transfer lines on the surface between either existing or refurbished reserve pits. Please see the attached ACTS exhibit C for placement of the proposed temporary lines. The temporary aluminum transfer lines will be utilized to transport frac fluid being injected and/or recovered during the

2/16/2012

RECEIVED: May. 21, 2012

completion process and will be laid adjacent to existing access roads or pipeline corridors. Upon completion of the frac operation, the liquids transfer lines will be flushed with fresh water and purged with compressed air. The contents of the transfer lines will be flushed into a water truck for delivery to another ACTS location or a reserve pit.

The volume of frac fluid transported through a water transfer line will vary, but volume is projected to be approximately 1.75 bbls per 50-foot joint. Although the maximum working pressure is 125 psig, the liquids transfer lines will be operated at a pressure of approximately 30 to 40 psig. Kerr-McGee requests to keep the netted pit open for one year from first production of the first produced well on the pad. During this time the surrounding well location completion fluids may be recycled in this pit and utilized for other frac jobs in the area. After one year Kerr-McGee will backfill the pit and reclaim. If the pit is not needed for an entire year it will be backfilled and reclaimed earlier. Kerr-McGee understands that due to the temporary nature of this system, BLM considers this a casual use situation; therefore, no permanent ROW or temporary use plan will need to be issued by the BLM.

**E. Location and Types of Water Supply:**

Water for drilling and completion operations will be obtained from the following sources:

Permit # 49-2307	JD Field Services	Green River- Section 15, T2N, R22E
Permit # 49-2321	R.N. Industries	White River- Section 2, T10S, R24E
Permit # 49-2319	R.N. Industries	White River- Various Sources
Permit # 49-2320	R.N. Industries	Green River- Section 33, T8S, R23E

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

**F. Construction Materials:**

Construction operations will typically be completed with native materials found on location. Construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source (described in site-specific documents). No construction materials will be removed from federal lands without prior approval from the BLM. A source location other than an on-location construction site will be designated either via a map or narrative within the project specific materials provided to the BLM.

**G. Methods for Handling Waste:**

All wastes subject to regulation will be handled in compliance with applicable laws to minimize the potential for leaks or spills to the environment. Kerr-McGee also maintains a Spill Control and Countermeasure Plan, which includes notification requirements, including the BLM, for all reportable spills of oil, produced liquids, and hazardous materials.

Any accidental release, such as a leak or spill in excess of the reportable quantity, as established by 40 CFR Part 117.3, will be reported as per the requirements of CERCLA, Section 102 B. If a release involves petroleum hydrocarbons or produced liquids, Kerr-McGee will comply with the notification requirements of NTL-3A. Drill cuttings and/or drilling fluids will be contained in the reserve/frac pit whether a closed loop system is used or not. Cuttings will be buried in pit(s) upon closure. Unless specifically approved by the BLM, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface precipitation runoff into the pit (via appropriate placement of subsoil storage areas and/or construction of berms, ditches, etc). Should unexpected liquid petroleum hydrocarbons (crude oil or condensate) be encountered during drilling, completions or well testing, liquid petroleum hydrocarbons will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a reserve/completion pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by the BLM. Should timely removal not be feasible, the pit will be netted as soon as practical. Similarly,

hydrocarbon removal will take place prior to the closure of the pit, unless authorization is provided for disposal via alternate pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with an impermeable liner. The liner will be a synthetic material 30 mil or thicker. The bottom and side walls of the pit will be void of any sharp rocks that could puncture the liner. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. After evaporation and when dry, the reserve pit liners will be cut off, ripped and/or folded back (as safety considerations allow) as near to the mud surface as possible and buried on location or hauled to a landfill prior to backfilling the pit with a minimum of five feet of soil material.

Where necessary and if conditions (freeboard, etc.) allow, produced liquids from newly completed wells may be temporarily disposed of into pits for a period not to exceed 90 days as per Onshore Order Number 7 (OSO 7). Subsequently, permanent approved produced water disposal methods will be employed in accordance with OSO 7 and/or as described in a Water Management Plan (WMP). Otherwise, fluids disposal locations and associated haul routes, for ROW consideration, are typically depicted on Topo A of individual projects. Revisions to the water source or method of transportation will be subject to written approval from the BLM.

Any additional pits necessary for subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after one year from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse (trash and other solid waste including cans, paper, cable, etc.) generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility. Immediately after removal of the drilling rig, all debris and other waste materials not contained within trash receptacles will be collected and removed from the well location.

For the protection of livestock and wildlife, all open pits (excluding flare pits) will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet. Siphons, catchments, and absorbent pads will be installed to keep hydrocarbons produced by the drilling rig or other equipment on location from entering the reserve pit. Hydrocarbons, contaminated pads, and/or soils will be disposed of in accordance with state and federal requirements.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

### **Materials Management**

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

2/16/2012

RECEIVED: May. 21, 2012

Hazardous materials may be contained in some grease or lubricants, solvents, acids, paint, and herbicides, among others as defined above. Kerr-McGee maintains a file, per 29 CFR 1910.1200 (g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances that are used during the course of construction, drilling, completion, and production operations for this project. The transport, use, storage and handling of hazardous materials will follow procedures specified by federal and state regulations. Transportation of hazardous materials to the well location is regulated by the Department of Transportation (DOT) under 49 CFR, Parts 171-180. DOT regulations pertain to the packing, container handling, labeling, vehicle placarding, and other safety aspects.

Potentially hazardous materials used in the development or operation of wells will be kept in limited quantities on well sites and at the production facilities for short periods of time. Chemicals meeting the criteria for being an acutely hazardous material/substance or meet the quantities criteria per BLM Instruction Memorandum No. 93-344 will not be used.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities (crude oil/condensate, produced water). They may also be kept in limited quantities on drilling sites (barite, diesel fuel, cement, cottonseed hulls etc.) for short periods of time during drilling or completion activities.

Fluids disposal and pipeline/haul routes are depicted on Topo Map A.

Any produced water separated from recoverable condensate from the proposed well will be contained in a water tank and will then be transported by pipeline and/or truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E  
NBU #159 in Sec. 35 T9S R21E  
Ace Oilfield in Sec. 2 T6S R20E  
MC&MC in Sec. 12 T6S R19E  
Pipeline Facility in Sec. 36 T9S R20E  
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E  
Bonanza Evaporation Pond in Sec. 2 T10S R23E

Or to one of the following Kerr-McGee active Salt Water Disposal (SWD) wells:

NBU 159 SWD in Sec. 35 T9S R21E  
CIGE 112D SWD in Sec. 19 T9S R21E  
CIGE 114 SWD in Sec. 34 T9S R21E  
NBU 921-34K SWD in Sec. 34 T9S R21E  
NBU 921-33F SWD in Sec. 34 T9S R21E

#### **H. Ancillary Facilities:**

No additional ancillary facilities are planned for this location.

#### **I. Well Site Layout:**

The location, orientation and aerial extent of each drill pad, reserve/completion/flare pit (for closed loop or non-closed loop operations), access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure, proposed cuts and fills, and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment depending on whether a closed loop system is used. Surface distance may be less if using closed loop. But in either case, the area of disturbance will not exceed the maximum disturbance outlined in the attached exhibits.

For the protection of livestock and wildlife, all open pits and cellars will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

2/16/2012

**RECEIVED:** May. 21, 2012

Each well will utilize either a centralized tank battery, centralized fluids management system, or have tanks installed on its pad. Production/ Produced Liquid tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks will be kept reasonably free from surface accumulations of liquid hydrocarbons. The tanks are not to be used for disposal of liquids from additional sources without prior approval of BLM.

#### **J. Plans for Surface Reclamation:**

The surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. Interim reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

##### **Interim Reclamation**

Interim reclamation may include pit evaporation, fluid removal, pit solidification, re-contouring, ripping, spreading top soil, seeding, and/or weed control. Interim reclamation will be performed in accordance with OSO 1, or written notification will be provided to the BLM for approval. Where feasible, drilling locations, reserve pits, or access routes not utilized for production operations will be re-contoured to a natural appearance.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit. Disposal of pit fluids and linings is discussed in Section G.

##### **Final Reclamation**

Final reclamation will be performed for unproductive wells and after the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by Kerr-McGee. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. The BLM will be notified prior to commencement of reclamation operations. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring the site to the approximate contour that existed prior to pad construction, final grading will be conducted over the entire surface of the well site and access road. The area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers, where practical. The surface soil material will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep, where practical. The entire area will be uniformly covered with the depressions constructed perpendicular to the natural flow of water.

Reclamation of roads will be performed at the discretion of the BLM. All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded in accordance with the seeding specifications of the BLM.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to the BLM.

#### **Measures Common to Interim and Final Reclamation**

Soil preparation will be conducted using a disk for areas in need of more soil preparation following site preparation. This will provide primary soil tillage to a depth no greater than 6 inches. Prior to reseeding, compacted areas will be scarified by ripping or chiseling to loosen compacted soils, promote water infiltration, and improve soil aeration and root penetration.

Seeding will occur year-round as conditions allow and will typically be accomplished through the use of a no-till rangeland style seed drill with a “picker box” in order to seed “fluffy” seed. Where drill seeding is not the preferred method, seed will be broadcast and then raked into the ground at double the rate of drill seeding. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The seed mixes will be selected from a list provided by or approved by the BLM, or a specific seed mix will be proposed by Kerr-McGee to the BLM and used after its approval. The selected specific seed mix for each well location and road segment will be utilized while performing interim and final reclamation for each project. All seed will be certified and tags will be maintained by Kerr-McGee. Every effort will be made to obtain “cheat grass free seed”.

Seed Mix to be used for Well Site, Access Road, and Pipeline (as applicable):

<b>Bonanza Area Mix</b>	<b>Pure Live Seed lbs/acre</b>
Crested Wheat (Hycrest)	2
Bottlebrush Squirreltail	1
Western Wheatgrass (Arriba)	1
Indian Ricegrass	1
Fourwing Saltbush	2
Shadscale	2
Forage Kochia	0.25
Rocky Mountain Bee	0.5
<b>Total</b>	<b>9.75</b>

Additional soil amendments and/or stabilization may be required on sites with poor soils and/or excessive erosion potential. Where severe erosion can become a problem and/or the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. Slopes will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to: erosion control blankets, hydro-mulch, and/or bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage. Soil amendments such as “Sustain” (an organic fertilizer that will be applied at the rate 1,800 – 2,100 lbs/acre with seed) may also be dry broadcast or applied with hydro-seeding equipment.

#### **Weed Control**

All weed management will be done in accordance with the Vernal BLM Surface Disturbance Weed Policy. Noxious weeds will be controlled, as applicable, on project areas. Monitoring and management of noxious and/or invasive weeds of concern will be completed annually until the project is deemed successfully reclaimed by the surface management agency and/or owner according to the Anadarko Integrated Weed Management Plan. Noxious weed infestations will be mapped using a GPS unit and submitted to the BLM with information required in the Vernal BLM Surface Disturbance Weed Policy. If herbicide is to be applied it will be done according to an approved Pesticide Use Permit (PUP), inclusive of applicable locations. All pesticide applications will be recorded using a Pesticide Application Record (PAR) and will be submitted along with a Pesticide Use Report (PUR) annually prior to Dec. 31.

**Monitoring**

Monitoring of reclaimed project areas will be completed annually during the growing season and actions to ensure reclamation success will be taken as needed. During the first two growing seasons an ocular methodology will be used to determine the success of the reclamation activities. During the 3rd growing season a 200 point line intercept (quantitative) methodology will be used to obtain basal cover. The goal is to have the reclaimed area reach 30% basal cover when compared to the reference site. If after three growing seasons the area has not reached 30% basal cover, additional reclamation activities may be necessary. Monitoring will continue until the reclaimed area reaches 75% basal cover of desirable vegetation when compared to the reference site. (Green River District Reclamation Guidelines)

All monitoring reports will be submitted electronically to the Vernal BLM in the form of a geo-database no later than March 1st of the calendar year following the data collection.

**K. Surface/Mineral Ownership:**

United States of America  
Bureau of Land Management  
170 South 500 East  
Vernal, UT 84078  
(435)781-4400

**L. Other Information:****Onsite Specifics:**

- Trim pad at corners 2 and 3 so that toe of fill slope is at present location of corners 2 and 3
- Facilities: Will be painted Shadow Grey
- Top Soil: Need to save 4" topsoil and will be move and put around the corner
- Need to obtain a storm water permit
- BMP on the pit use (waddles, hay bails or silt fence)

**Cultural and Paleontological Resources**

All personnel are strictly prohibited from collecting artifacts, any paleontological specimens or fossils, and from disturbing any significant cultural resources in the area. If artifacts, fossils, or any culturally sensitive materials are exposed or identified in the area of construction, all construction operations that would affect the newly discovered resource will cease, and Kerr-McGee will provide immediate notification to the BLM.

**Resource Reports:**

A Class I literature review was completed on February 1, 2012 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 11-404.

A paleontological reconnaissance survey was completed on February 3, 2012 by Intermountain Paleo Consultants. For additional details please refer to report IPC 11-202PRE.

Biological field survey was completed on June 15, 2011 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-692.

**Proposed Action Annual Emissions Tables:**

<b>Table 1: Proposed Action Annual Emissions (tons/year)<sup>1</sup></b>			
<b>Pollutant</b>	<b>Development</b>	<b>Production</b>	<b>Total</b>
NO <sub>x</sub>	3.8	0.12	3.92
CO	2.2	0.11	2.31
VOC	0.1	4.9	5
SO <sub>2</sub>	0.005	0.0043	0.0093
PM <sub>10</sub>	1.7	0.11	1.81
PM <sub>2.5</sub>	0.4	0.025	0.425
Benzene	2.2E-03	0.044	0.046
Toluene	1.6E-03	0.103	0.105
Ethylbenzene	3.4E-04	0.005	0.005
Xylene	1.1E-03	0.076	0.077
n-Hexane	1.7E-04	0.145	0.145
Formaldehyde	1.3E-02	8.64E-05	1.31E-02

<sup>1</sup> Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

<b>Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison</b>			
<b>Species</b>	<b>Proposed Action Production Emissions (ton/yr)</b>	<b>WRAP Phase III 2012 Uintah Basin Emission Inventory<sup>a</sup> (ton/yr)</b>	<b>Percentage of Proposed Action to WRAP Phase III</b>
NO <sub>x</sub>	15.68	16,547	0.09%
VOC	20	127,495	0.02%

<sup>a</sup> [http://www.wrapair.org/forums/ogwg/PhaseIII\\_Inventory.html](http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html)

Uintah Basin Data

NBU 1022-3L3DS/ 1022-3M1DS/  
1022-3M2DS/ 1022-3M4CS

Surface Use Plan of Operations  
13 of 13

**M. Lessee's or Operators' Representative & Certification:**

Gina T. Becker  
Regulatory Analyst II  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6086

Tommy Thompson  
General Manager, Drilling  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.



Gina T. Becker

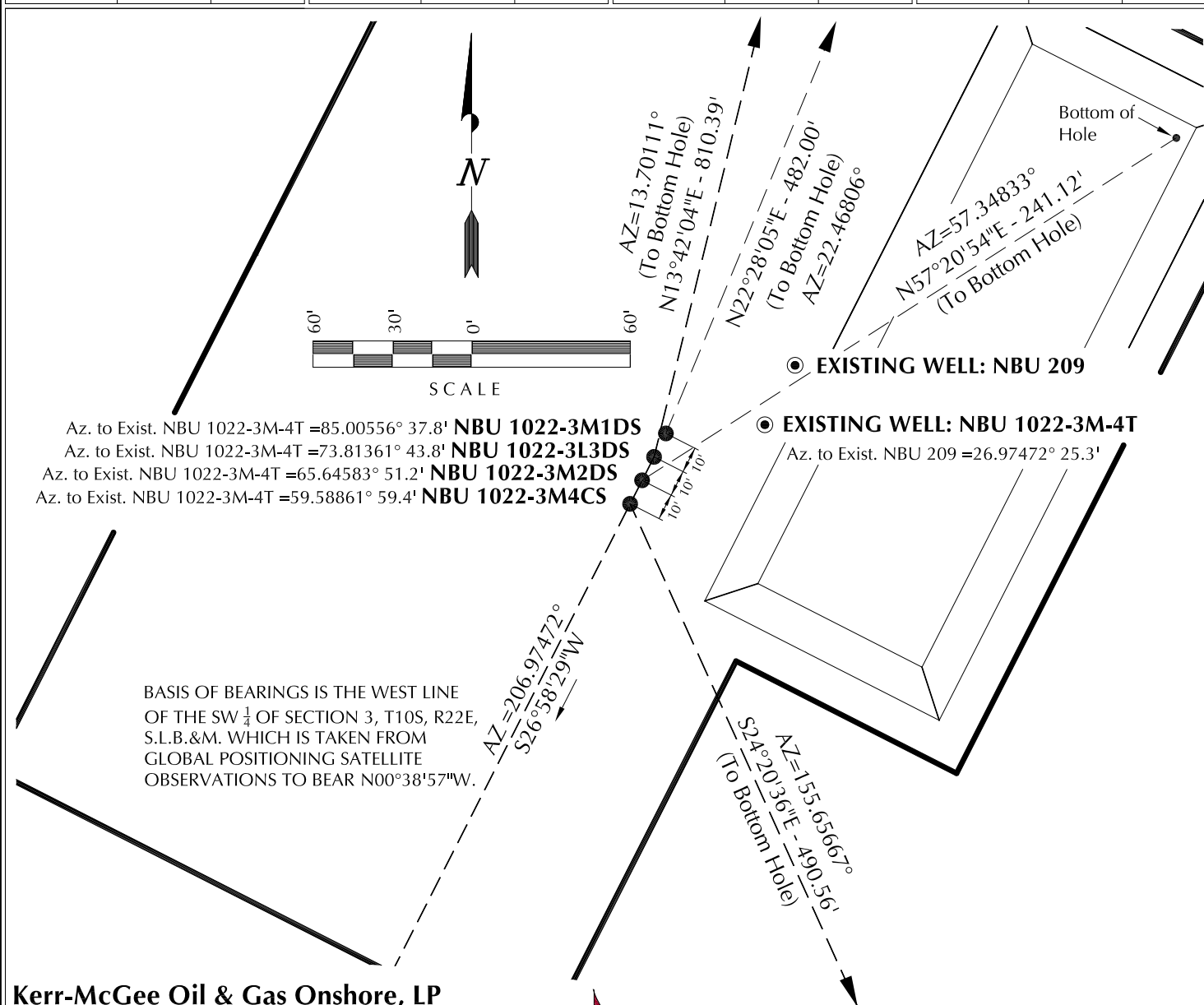
February 16, 2012

Date

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 1022-3M1DS	39°58'21.057"	109°25'59.355"	39°58'21.182"	109°25'56.897"	634' FSL	39°58'25.457"	109°25'56.988"	39°58'25.582"	109°25'54.530"	1082' FSL
NBU 1022-3L3DS	39.972516°	109.433154°	39.972550°	109.432471°	629' FWL	39.973738°	109.432497°	39.973773°	109.431814°	818' FWL
NBU 1022-3M2DS	39°58'20.969"	109°25'59.413"	39°58'21.093"	109°25'56.955"	625' FSL	39°58'28.747"	109°25'56.945"	39°58'28.871"	109°25'54.487"	1415' FSL
NBU 1022-3M4CS	39.972491°	109.433170°	39.972526°	109.432487°	624' FWL	39.974652°	109.432485°	39.974687°	109.431802°	825' FWL
NBU 1022-3M2DS	39°58'20.881"	109°25'59.471"	39°58'21.005"	109°25'57.013"	616' FSL	39°58'22.166"	109°25'56.864"	39°58'22.290"	109°25'54.406"	749' FSL
NBU 1022-3M4CS	39.972467°	109.433186°	39.972502°	109.432504°	620' FWL	39.972824°	109.432462°	39.972858°	109.431779°	824' FWL
NBU 1022-3M4CS	39°58'20.793"	109°25'59.530"	39°58'20.917"	109°25'57.072"	607' FSL	39°58'16.376"	109°25'56.935"	39°58'16.501"	109°25'54.477"	163' FSL
NBU 1022-3M4CS	39.972442°	109.433203°	39.972477°	109.432520°	615' FWL	39.971216°	109.432482°	39.971250°	109.431799°	812' FWL
NBU 1022-3M-4T	39°58'21.090"	109°25'58.872"	39°58'21.214"	109°25'56.414"	638' FSL					
NBU 209	39.972525°	109.433020°	39.972559°	109.432337°	666' FWL					
NBU 209	39°58'21.313"	109°25'58.724"	39°58'21.437"	109°25'56.267"	661' FSL					
NBU 209	39.972587°	109.432979°	39.972621°	109.432296°	678' FWL					

## RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 1022-3M1DS	445.4'	184.2'	NBU 1022-3L3DS	787.3'	191.9'	NBU 1022-3M2DS	130.1'	203.0'	NBU 1022-3M4CS	-446.9'	202.2'



**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 1022-3M**

**WELL PAD INTERFERENCE PLAT**  
WELLS - NBU 1022-3M1DS, NBU 1022-3L3DS,  
NBU 1022-3M2DS & NBU 1022-3M4CS  
LOCATED IN SECTION 3, T10S, R22E,  
S.L.B.&M., UTAH COUNTY, UTAH.



**CONSULTING, LLC**  
2155 North Main Street  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

**TIMBERLINE**

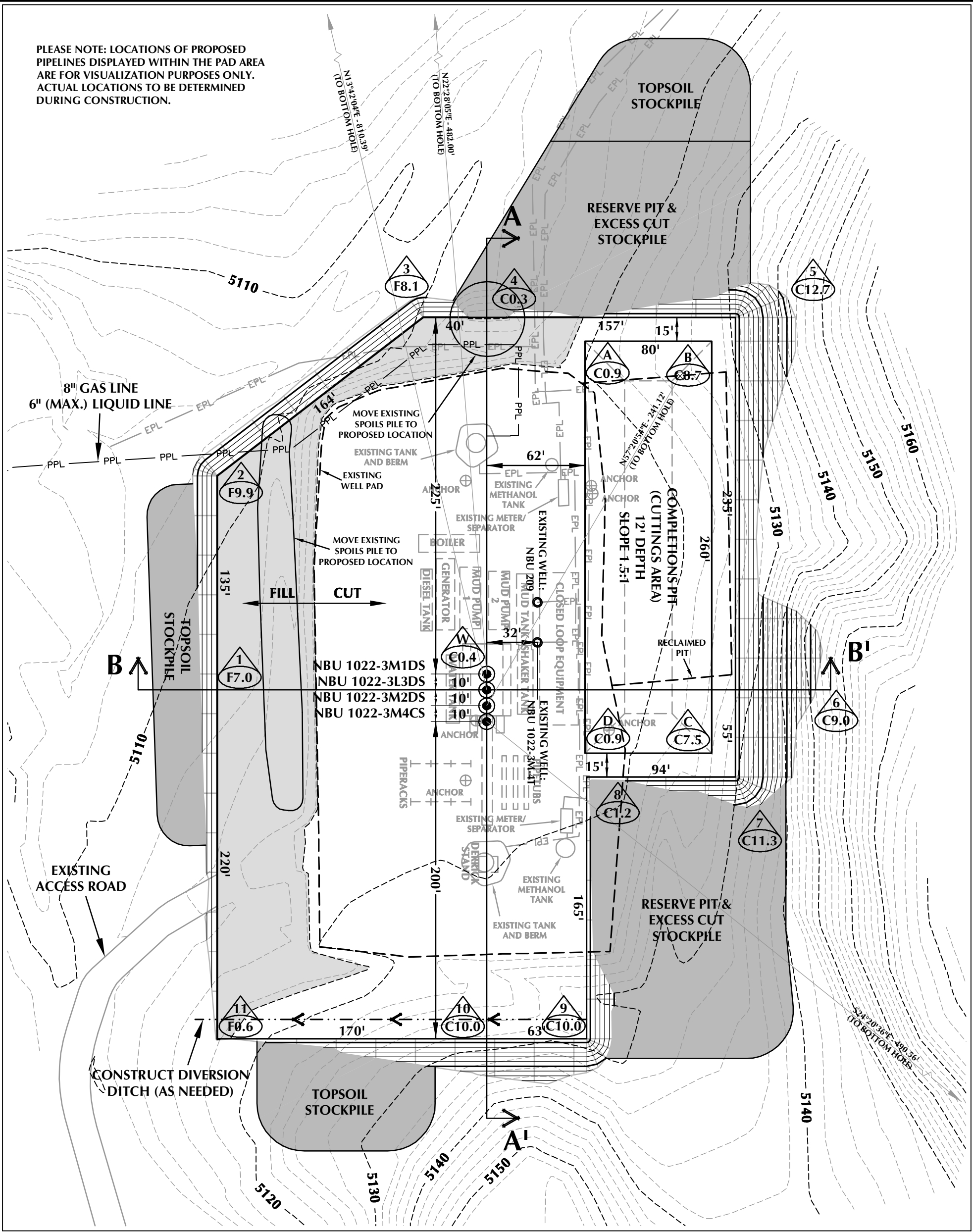
(435) 789-1365

ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 11-9-11	SURVEYED BY: J.W.	SHEET NO:  <b>5</b>  5 OF 16
DATE DRAWN: 11-15-11	DRAWN BY: J.G.C.	
SCALE: 1" = 60'	Date Last Revised:	

[illegible]

RECEIVED: May. 21, 2012



WELL PAD - NBU 1022-3M (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5118.8'  
FINISHED GRADE ELEVATION = 5118.4'  
CUT SLOPES = 1.5:1  
FILL SLOPES = 1.5:1  
TOTAL WELL PAD AREA = 3.43 ACRES  
TOTAL DISTURBANCE AREA = 4.72 ACRES  
SHRINKAGE FACTOR = 1.10  
SWELL FACTOR = 1.00

Kerr-McGee Oil & Gas Onshore, LP  
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 1022-3M

WELL PAD - LOCATION LAYOUT  
NBU 1022-3M1DS, NBU 1022-3L3DS,  
NBU 1022-3M2DS & NBU 1022-3M4CS  
LOCATED IN SECTION 3, T10S, R22E,  
S.L.B.&M., UTAH COUNTY, UTAH



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Sheridan, WY 82801  
Phone 307-674-0609  
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WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 7,852 C.Y.  
TOTAL FILL FOR WELL PAD = 6,015 C.Y.  
TOPSOIL @ 6" DEPTH = 1,568 C.Y.  
EXCESS MATERIAL = 1,837 C.Y.

COMPLETIONS PIT QUANTITIES

TOTAL CUT FOR COMPLETIONS PIT  
+/- 6,720 C.Y.  
COMPLETIONS PIT CAPACITY  
(2' OF FREEBOARD)  
+/- 25,260 BARRELS

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL - PROPOSED PIPELINE
- EPL - EXISTING PIPELINE

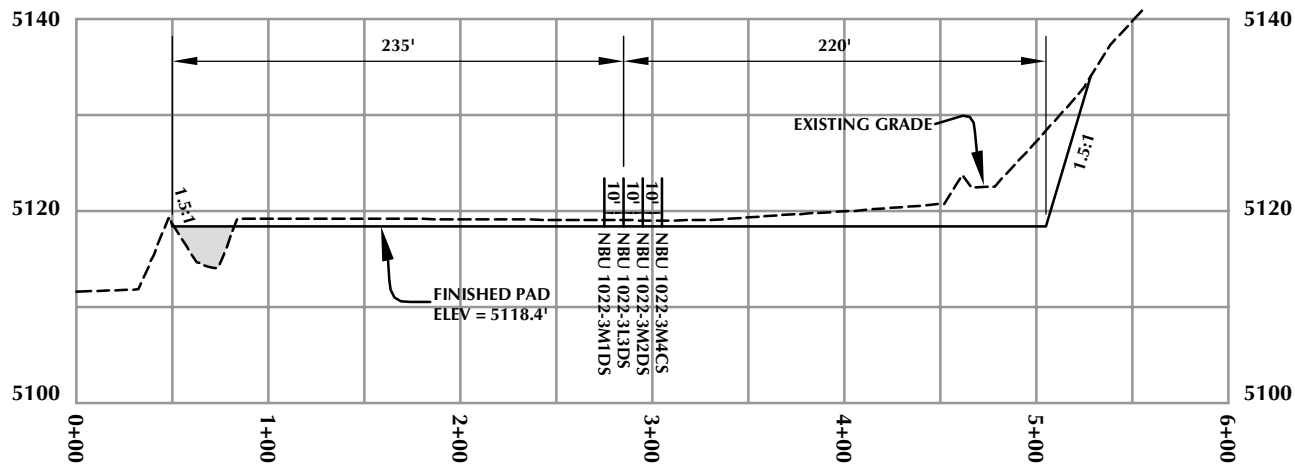


HORIZONTAL 0 30' 60' 1" = 60'  
2' CONTOURS

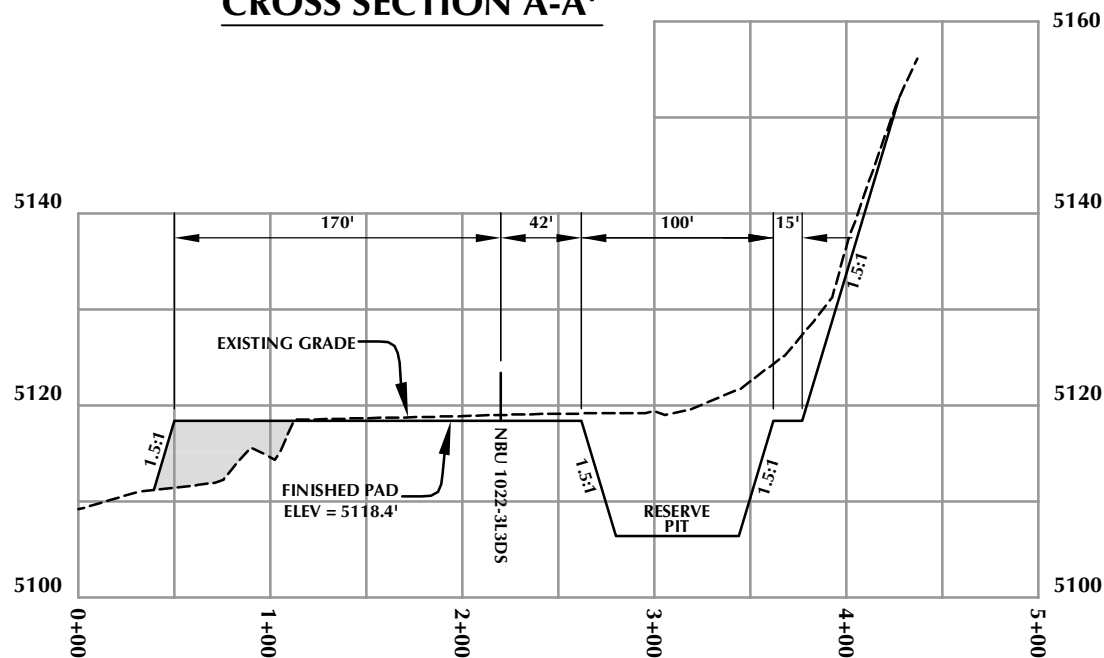
SCALE: 1"=60' DATE: 1/11/12 SHEET NO:

REVISED:

6B 6B OF 16



**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 1022-3M**

**WELL PAD - CROSS SECTIONS**  
NBU 1022-3M1DS, NBU 1022-3L3DS,  
NBU 1022-3M2DS & NBU 1022-3M4CS  
LOCATED IN SECTION 3, T10S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH



**CONSULTING, LLC**  
2155 North Main Street  
Sheridan, WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

**TIMBERLINE**  
ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365

**HORIZONTAL** 0 50' 100' 1" = 100'  
**VERTICAL** 0 10' 20' 1" = 20'

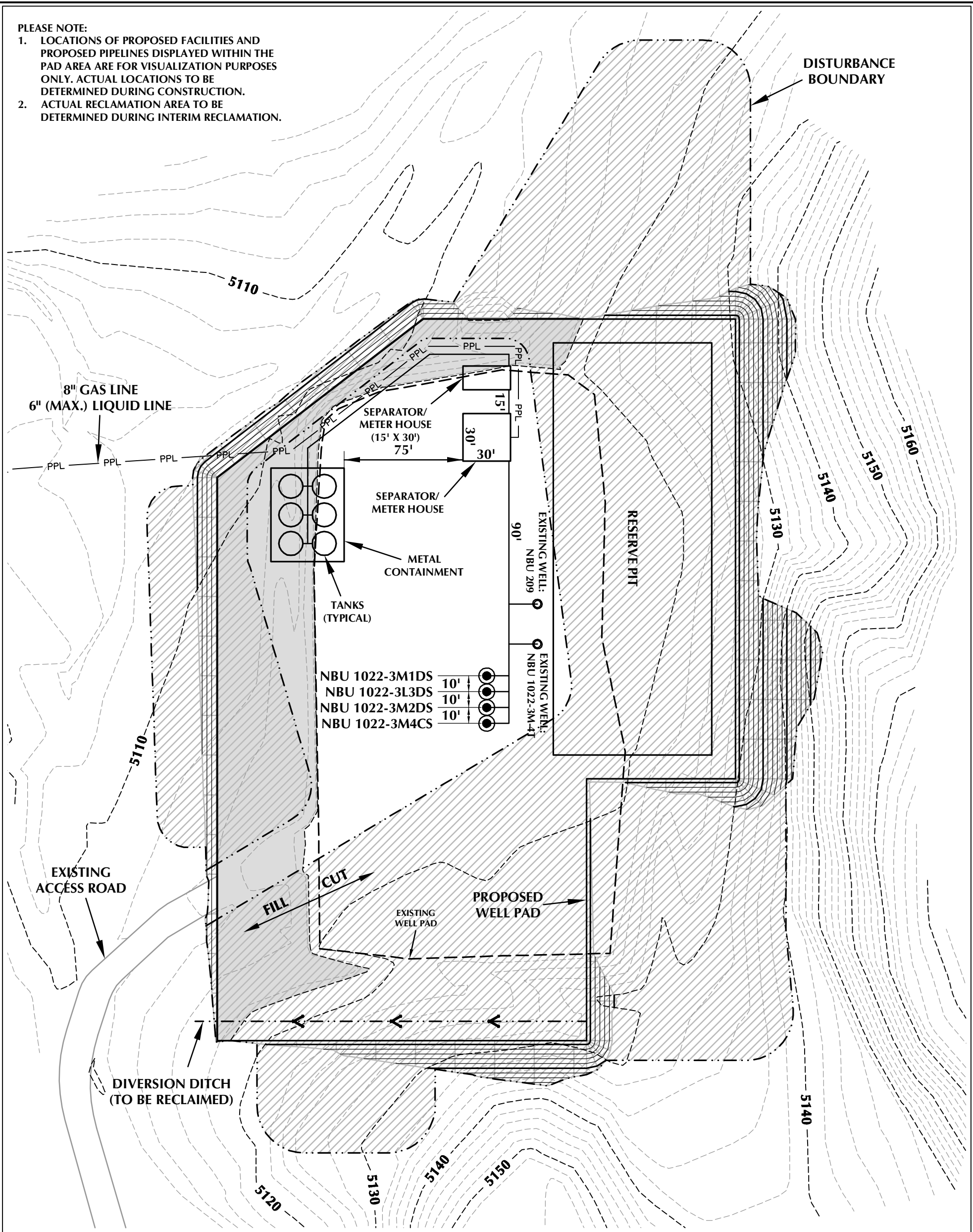
**Scale:** 1"=100'  
**REVISED:**

**Date:** 11/18/11  
**APF**  
1/13/12

**SHEET NO:**

**7**

7 OF 16



WELL PAD - NBU 1022-3M DESIGN SUMMARY

TOTAL DISTURBANCE AREA = 4.72 ACRES (INCLUDING EXISTING)  
RECLAMATION AREA = 3.59 ACRES  
TOTAL WELL PAD AREA AFTER RECLAMATION = 1.13 ACRES

Kerr-McGee Oil & Gas Onshore, LP  
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 1022-3M

WELL PAD - RECLAMATION LAYOUT  
NBU 1022-3M1DS, NBU 1022-3L3DS,  
NBU 1022-3M2DS & NBU 1022-3M4CS  
LOCATED IN SECTION 3, T10S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH



CONSULTING, LLC  
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209 NORTH 300 WEST - VERNAL, UTAH 84078

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WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL PROPOSED PIPELINE
- EPL EXISTING PIPELINE
- RECLAMATION AREA



HORIZONTAL 0 30' 60' 1" = 60'  
2' CONTOURS

SCALE: 1"=60' DATE: 1/11/12 SHEET NO: 8 8 OF 16  
REVISED:

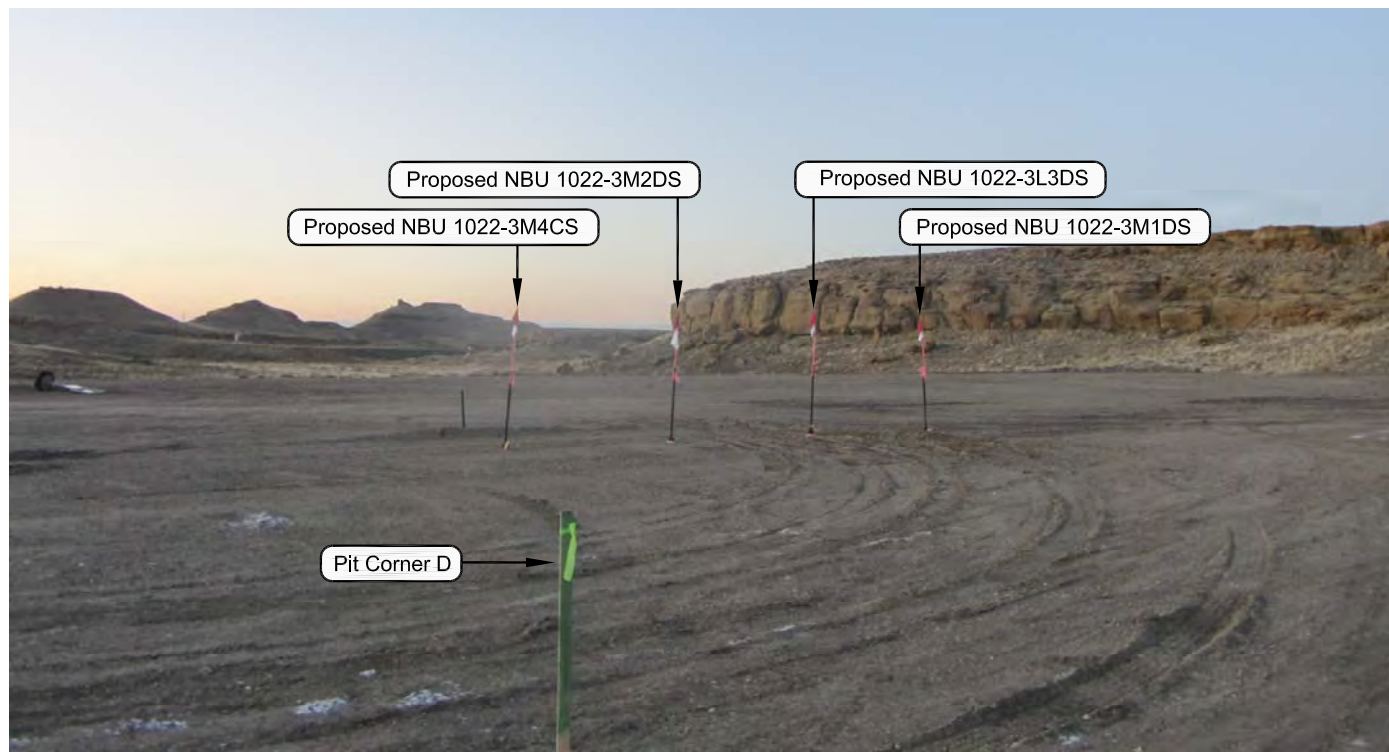


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHERLY



PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: NORTHEASTERLY

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 1022-3M**

**LOCATION PHOTOS**  
NBU 1022-3M1DS, NBU 1022-3L3DS,  
NBU 1022-3M2DS & NBU 1022-3M4CS  
LOCATED IN SECTION 3, T10S, R22E,  
S.L.B.&M., UTAH COUNTY, UTAH.



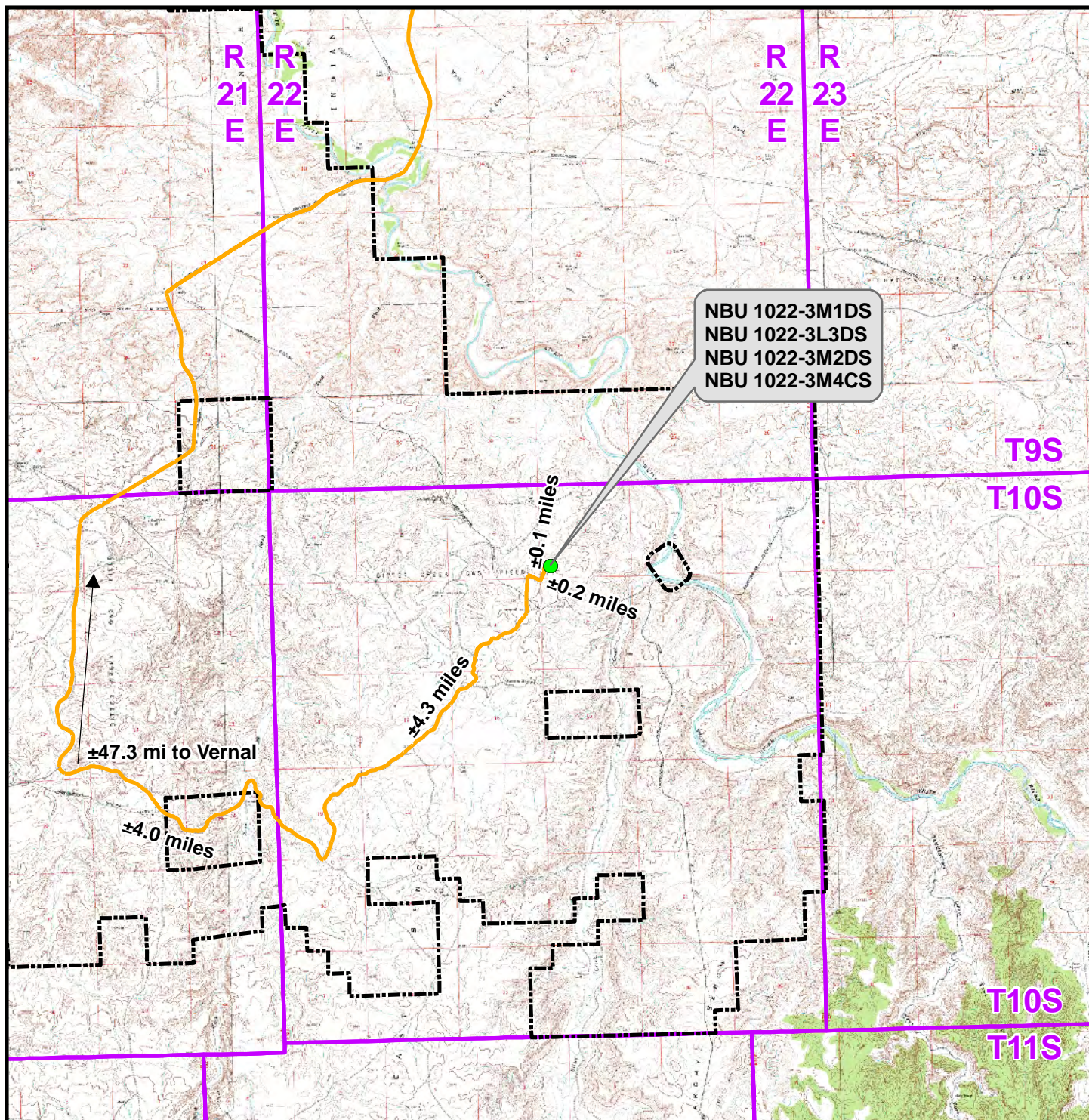
**CONSULTING, LLC**  
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**TIMBERLINE**

(435) 789-1365

ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 11-9-11	PHOTOS TAKEN BY: J.W.	SHEET NO:  <b>9</b> 9 OF 16
DATE DRAWN: 11-15-11	DRAWN BY: J.G.C.	
Date Last Revised:		



### Legend

- Proposed Well Location
- Natural Buttes Unit Boundary
- Access Route - Proposed

Distance From Well Pad - NBU 1022-3M To Unit Boundary: ±5,915ft

### WELL PAD - NBU 1022-3M

**TOPO A**  
 NBU 1022-3M1DS, NBU 1022-3L3DS,  
 NBU 1022-3M2DS & NBU 1022-3M4CS  
 LOCATED IN SECTION 3, T10S, R22E,  
 S.L.B.&M., UINTAH COUNTY, UTAH

**Kerr-McGee Oil &  
 Gas Onshore L.P.**

1099 18th Street  
 Denver, Colorado 80202



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SCALE: 1:100,000

DRAWN: TL

REVISED:

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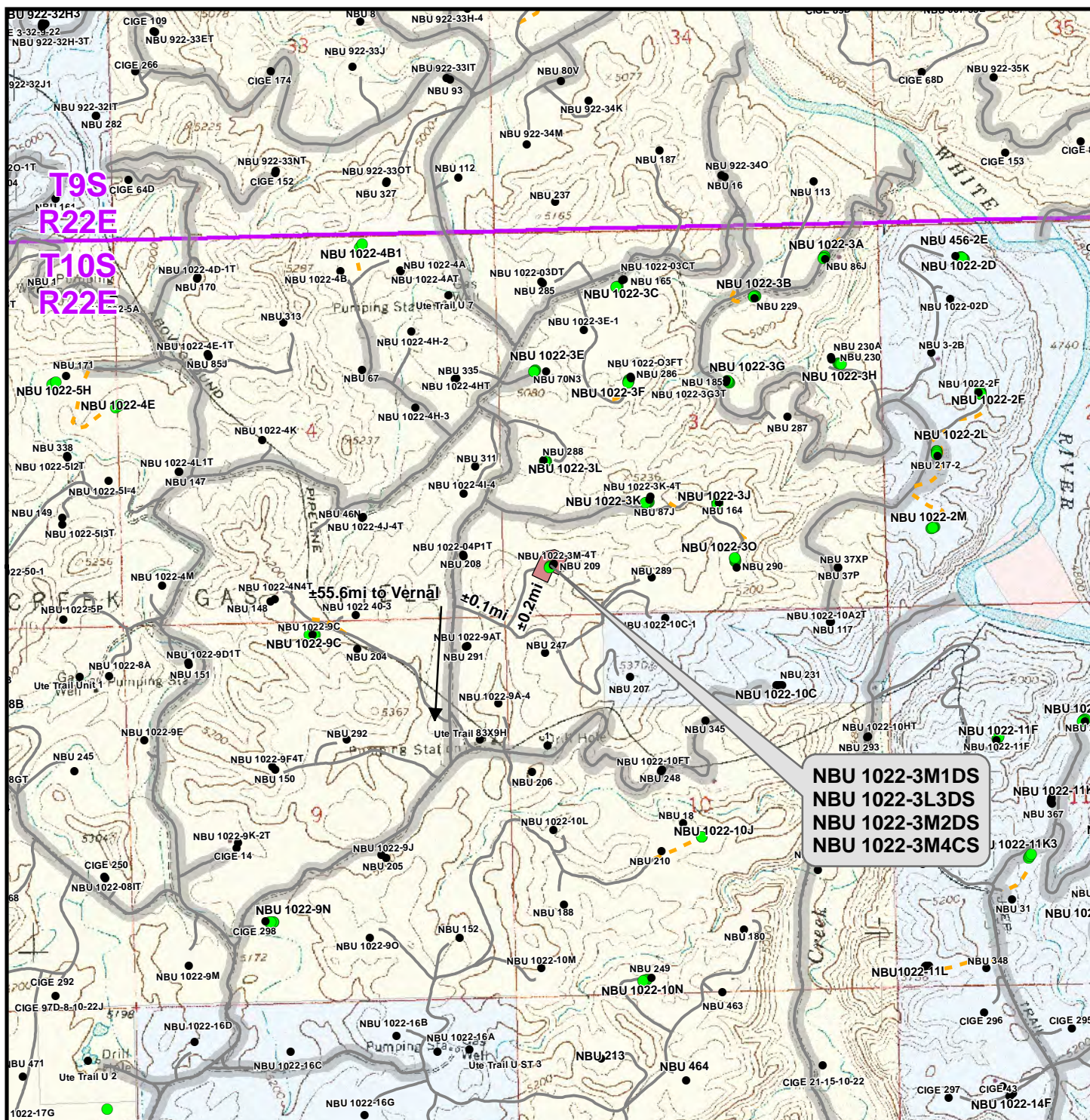
DATE: 18 Nov 2011

DATE:

SHEET NO:

**10**

10 OF 16

**Legend**

- Well - Proposed     Well Pad    --- Road - Proposed     County Road     Bureau of Land Management     State  
● Well - Existing    --- Road - Existing     Indian Reservation     Private

Total Proposed Road Length: ±0ft

**WELL PAD - NBU 1022-3M**

**TOPO B**  
 NBU 1022-3M1DS, NBU 1022-3L3DS,  
 NBU 1022-3M2DS & NBU 1022-3M4CS  
 LOCATED IN SECTION 3, T10S, R22E,  
 S.L.B.&M., UINTAH COUNTY, UTAH

**Kerr-McGee Oil &  
 Gas Onshore L.P.**

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 Denver, Colorado 80202

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 Sheridan, Wyoming 82801  
 Phone 307-674-0609  
 Fax 307-674-0182



SCALE: 1" = 2,000ft

DRAWN: TL

REVISED:

NAD83 USP Central

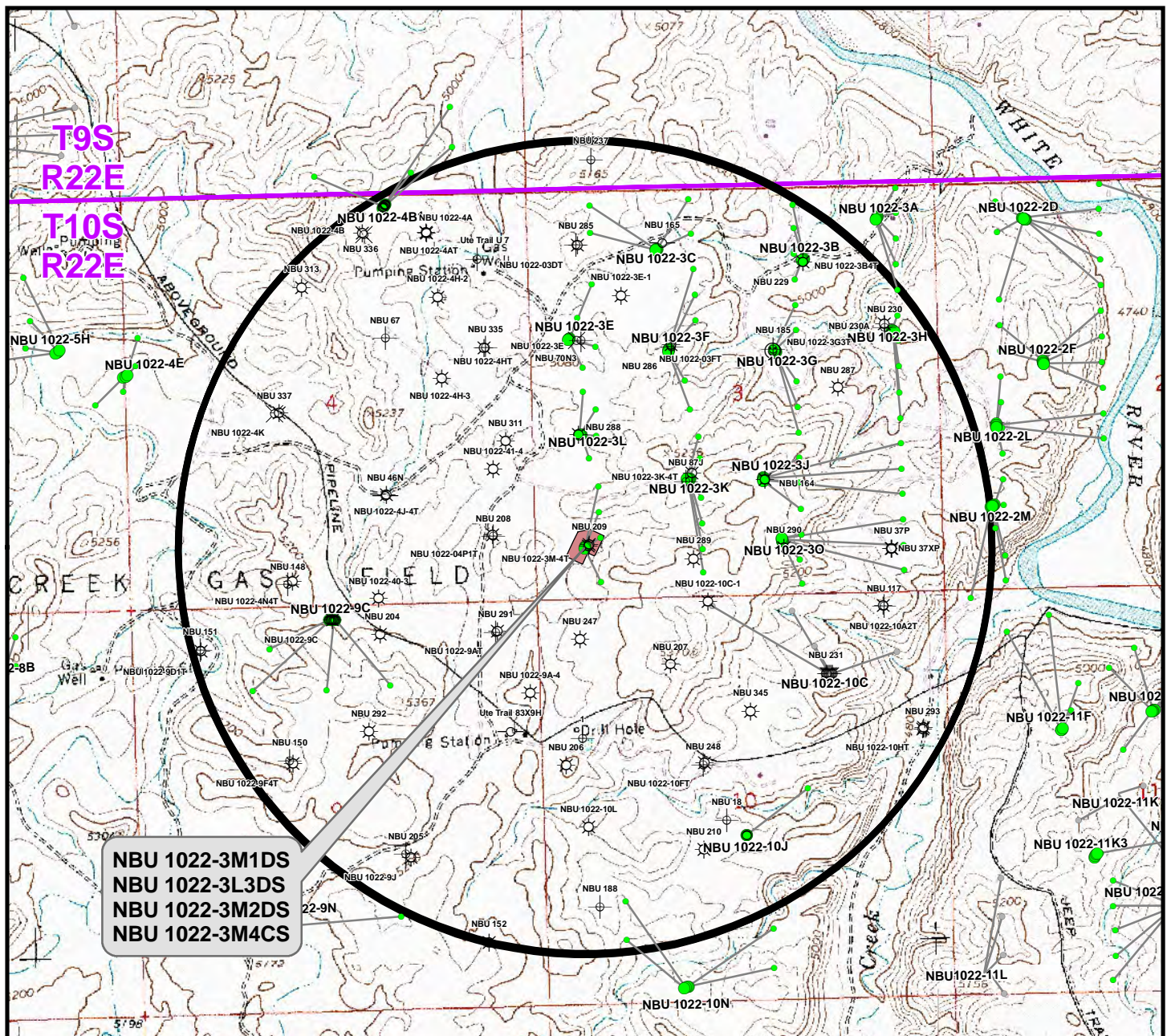
DATE: 18 Nov 2011

DATE:

SHEET NO:

**11**

11 OF 16



Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 1022-3M1DS	NBU 209	441ft
NBU 1022-3L3DS	NBU 288	717ft
NBU 1022-3M2DS	NBU 209	169ft
NBU 1022-3M4CS	NBU 1022-3M-4T	500ft

### Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- ☀ Producing
- ☺ Spudded
- APD Approved
- ⊙ Preliminary Location
- ⊕ Deferred
- ✕ Cancelled
- ⊖ Temporarily Abandoned
- ☀ Active Injector
- ⊕ Location Abandoned
- ⊖ Plugged & Abandoned
- ⊖ Shut-In

### WELL PAD - NBU 1022-3M

TOPO C  
NBU 1022-3M1DS, NBU 1022-3L3DS,  
NBU 1022-3M2DS & NBU 1022-3M4CS  
LOCATED IN SECTION 3, T10S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH

**Kerr-McGee Oil &  
Gas Onshore L.P.**

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Denver, Colorado 80202



**CONSULTING, LLC**

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Sheridan, Wyoming 82801  
Phone 307-674-0609  
Fax 307-674-0182

SCALE: 1" = 2,000ft

DRAWN: TL

REVISED:

NAD83 USP Central

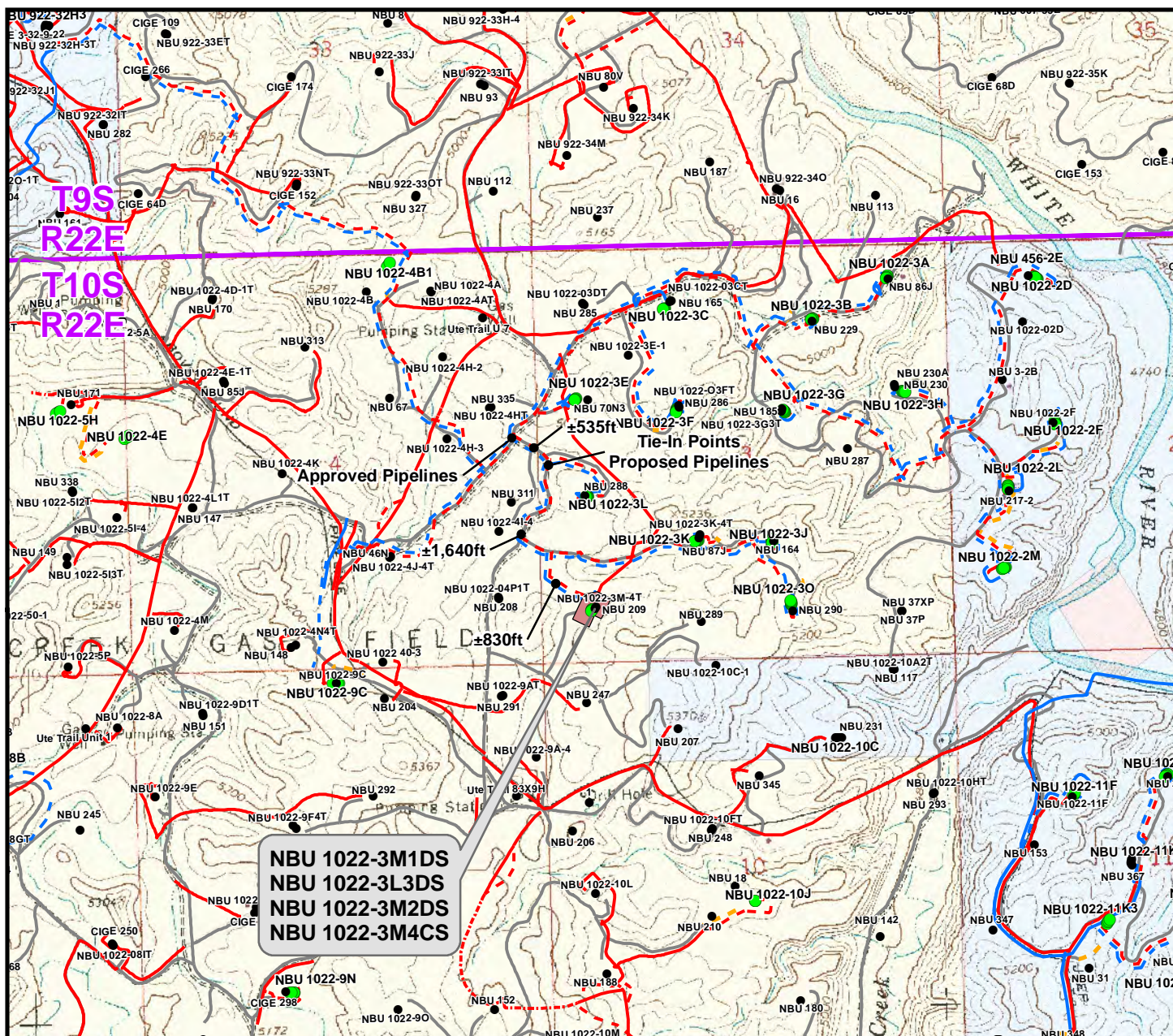
DATE: 18 Nov 2011

DATE:

SHEET NO:

**12**

12 OF 16



Proposed Liquid Pipeline	Length
Buried 6" (Max.) (Meter House to Edge of Pad)	±255ft
Buried 6" (Max.) (Edge of Pad to 3K Intersection)	±830ft
Buried 6" (Max.) (3K Intersection to 3L Intersection)	±1,640ft
<b>TOTAL PROPOSED BURIED LIQUID PIPELINE =</b>	<b>±2,725ft</b>

Proposed Gas Pipeline	Length
Buried 8" (Meter House to Edge of Pad)	±255ft
Buried 8" (Edge of Pad to 3K Intersection)	±830ft
Buried 16" (3K Intersection to 3L Intersection)	±1,640ft
<b>TOTAL PROPOSED BURIED GAS PIPELINE =</b>	<b>±2,725ft</b>

## WELL PAD - NBU 1022-3M

**TOPO D**  
**NBU 1022-3M1DS, NBU 1022-3L3DS,**  
**NBU 1022-3M2DS & NBU 1022-3M4CS**  
**LOCATED IN SECTION 3, T10S, R22E,**  
**S.L.B.&M., UINTAH COUNTY, UTAH**

**Kerr-McGee Oil &  
 Gas Onshore L.P.**

**1099 18th Street  
 Denver, Colorado 80202**



**CONSULTING, LLC**

2155 North Main Street  
 Sheridan, Wyoming 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

SCALE: 1" = 2,000ft

DRAWN: TL

REVISED:

NAD83 USP Central

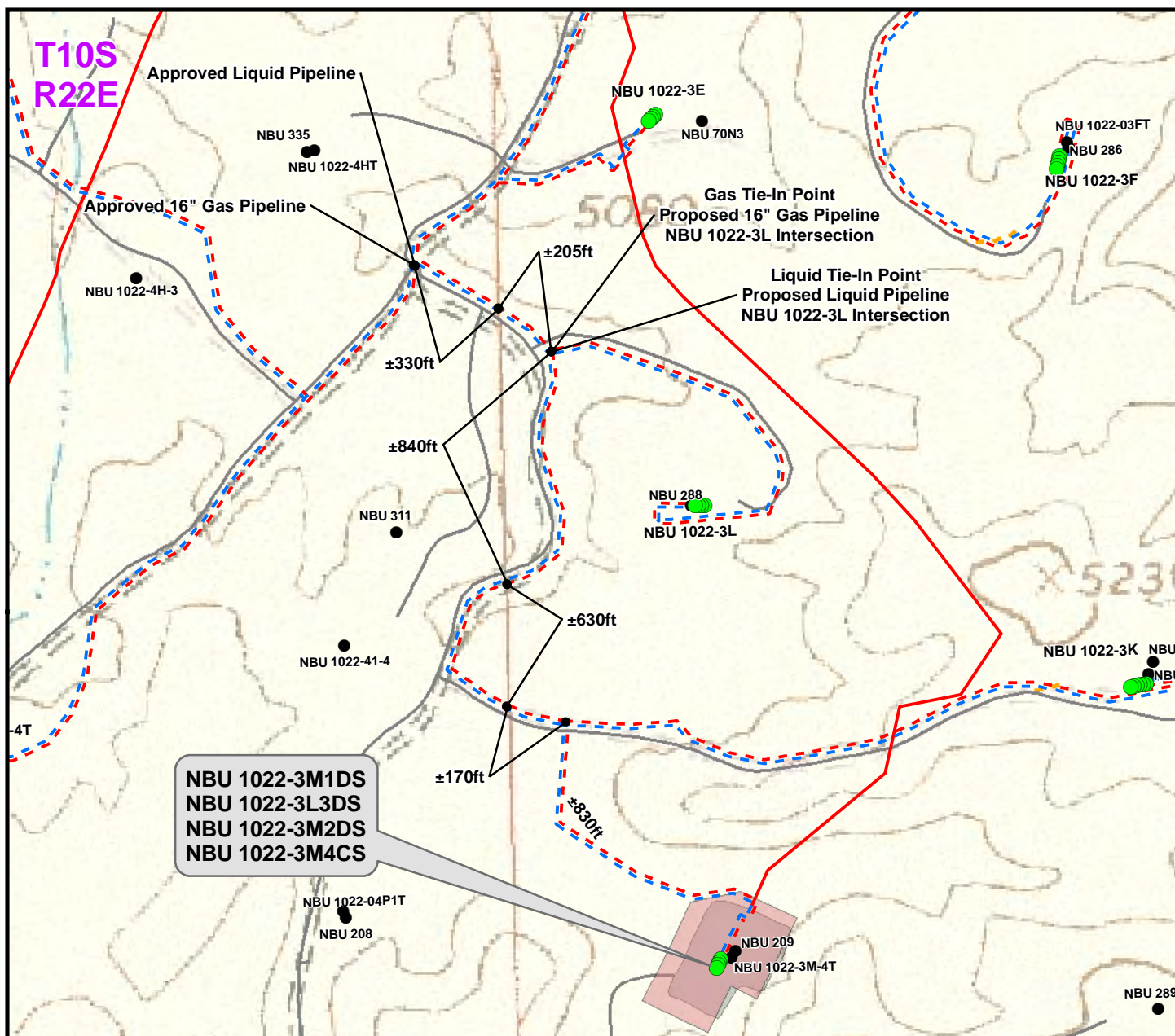
DATE: 18 Nov 2011

DATE:

SHEET NO:

**13**

13 OF 16



Proposed Liquid Pipeline	Length
Buried 6" (Max.) (Meter House to Edge of Pad)	±255ft
Buried 6" (Max.) (Edge of Pad to 3K Intersection)	±830ft
Buried 6" (Max.) (3K Intersection to 3L Intersection)	±1,640ft
<b>TOTAL PROPOSED BURIED LIQUID PIPELINE =</b>	<b>±2,725ft</b>

Proposed Gas Pipeline	Length
Buried 8" (Meter House to Edge of Pad)	±255ft
Buried 8" (Edge of Pad to 3K Intersection)	±830ft
Buried 16" (3K Intersection to 3L Intersection)	±1,640ft
<b>TOTAL PROPOSED BURIED GAS PIPELINE =</b>	<b>±2,725ft</b>

**Legend**

● Well - Proposed	■ Well Pad - Proposed	- - - Gas Pipeline - Proposed	- - - Liquid Pipeline - Proposed	- - - Road - Proposed	■ Bureau of Land Management
● Well - Existing	■ Well Pad - Existing	- - - Gas Pipeline - To Be Upgraded	- - - Liquid Pipeline - Existing	- - - Road - Existing	■ Indian Reservation
		- - - Gas Pipeline - Existing			■ State
					■ Private

**WELL PAD - NBU 1022-3M**

TOPO D2 (PAD & PIPELINE DETAIL)  
 NBU 1022-3M1DS, NBU 1022-3L3DS,  
 NBU 1022-3M2DS & NBU 1022-3M4CS  
 LOCATED IN SECTION 3, T10S, R22E,  
 S.L.B.&M., UINTAH COUNTY, UTAH

**Kerr-McGee Oil &  
 Gas Onshore L.P.**

1099 18th Street  
 Denver, Colorado 80202

**CONSULTING, LLC**

2155 North Main Street  
 Sheridan, Wyoming 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

SCALE: 1" = 500ft

DRAWN: TL

REVISED: TL

NAD83 USP Central

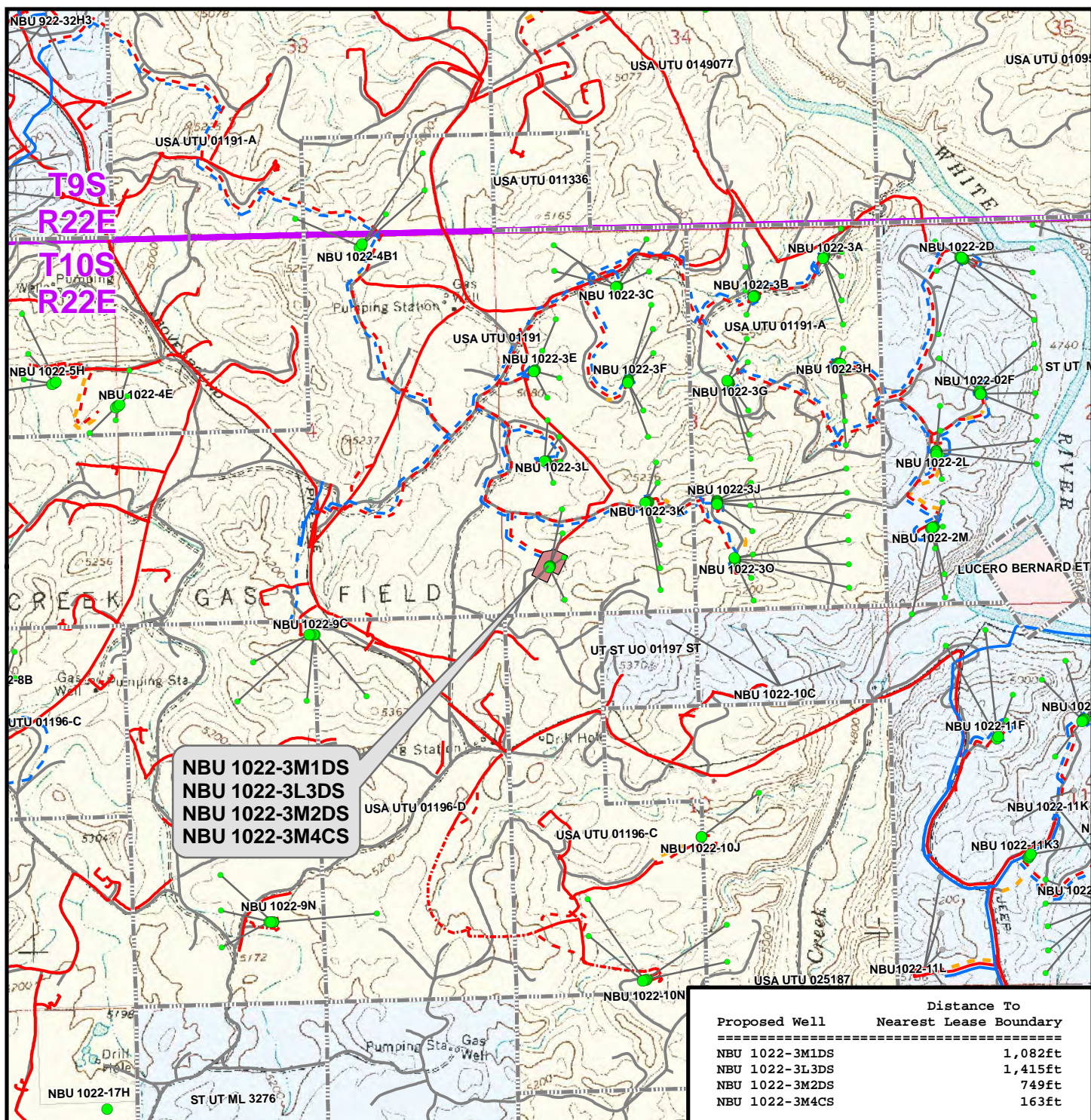
DATE: 18 Nov 2011

DATE: 13 Jan 2012

SHEET NO:

**14**

14 OF 16



### Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- ▬ Lease Boundary
- Gas Pipeline - Proposed
- Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- Liquid Pipeline - Proposed
- Liquid Pipeline - Existing
- Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

### WELL PAD - NBU 1022-3M

TOPO E  
NBU 1022-3M1DS, NBU 1022-3L3DS,  
NBU 1022-3M2DS & NBU 1022-3M4CS  
LOCATED IN SECTION 3, T10S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH

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Denver, Colorado 80202



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Sheridan, Wyoming 82801  
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Fax 307-674-0182

SCALE: 1" = 2,000ft

DRAWN: TL

REVISED:

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DATE: 18 Nov 2011

DATE:

SHEET NO:

**15**

15 OF 16



Kerr-McGee Oil & Gas Onshore LP  
1099 18TH STREET STE. 1800  
DENVER, CO 80202  
720-929-6708 • FAX 720-929-7708  
E-MAIL: JOE.JOHNSON@ANADARKO.COM

February 14, 2012

Ms. Diana Mason  
Division of Oil, Gas and Mining  
P.O. Box 145801  
Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11  
NBU 1022-3L3DS  
T10S-R22E  
Section 3: SWSW/NWSW  
Surface: 625' FSL, 624' FWL  
Bottom Hole: 1415' FSL, 825' FWL  
Utah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to the Exception to Location and Siting of Wells.

- Kerr-McGee's NBU 1022-3L3DS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

A handwritten signature in blue ink, appearing to read 'Joe D. Johnson', with a horizontal line drawn underneath.

Joseph D. Johnson  
Landman

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 01191
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-3L3DS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0625 FSL 0624 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 03 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047504910000
<b>5. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: <b>7/16/2012</b>  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION         </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER         </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input checked="" type="checkbox"/> <b>APD EXTENSION</b>          OTHER: <input style="width: 100px;" type="text"/> </div> </div>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.		
<div style="text-align: right;"> <b>Approved by the</b>  <b>Utah Division of</b>  <b>Oil, Gas and Mining</b>   <b>Date:</b> June 07, 2012  <b>By:</b> </div>		
<b>NAME (PLEASE PRINT)</b> Jenn Hawkins	<b>PHONE NUMBER</b> 720 929-6247	<b>TITLE</b> Staff Operations Specialist III
<b>SIGNATURE</b> N/A	<b>DATE</b> 6/5/2012	



**The Utah Division of Oil, Gas, and Mining**

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

**Request for Permit Extension Validation Well Number 43047504910000**

API: 43047504910000

Well Name: NBU 1022-3L3DS

Location: 0625 FSL 0624 FWL QTR NWSW SEC 03 TWNP 100S RNG 220E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date Original Permit Issued: 7/16/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☒ Yes ☐ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

Signature: Jenn Hawkins

Date: 6/5/2012

Title: Staff Operations Specialist III Representing: KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FEB 27 2012

FORM APPROVED  
OMB No. 1004-0136  
Expires July 31, 2010APPLICATION FOR PERMIT TO DRILL **BLM, Vernal Utah**

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU01191
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator KERR-MCGEE OIL & GAS ONSHORE Contact: GINA T BECKER Email: GINA.BECKER@ANADARKO.COM		7. If Unit or CA Agreement, Name and No. UTU63047A
3a. Address P.O. BOX 173779 DENVER, CO 80202-3779		8. Lease Name and Well No. NBU 1022-3L3DS
3b. Phone No. (include area code) Ph: 720-929-6086 Fx: 720-929-7086		9. API Well No. 43-047-50491
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SWSW 625FSL 624FWL 39.972491 N Lat, 109.433170 W Lon At proposed prod. zone NWSW 1415FSL 825FWL 39.974652 N Lat, 109.432485 W Lon		10. Field and Pool, or Exploratory NATURAL BUTTES
14. Distance in miles and direction from nearest town or post office* APPROXIMATELY 56 MILES SOUTHEAST OF VERNAL, UTAH		11. Sec., T., R., M., or Blk. and Survey or Area Sec 3 T10S R22E Mer SLB
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1415	16. No. of Acres in Lease 1042.00	12. County or Parish UINTAH
17. Spacing Unit dedicated to this well	18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 717	13. State UT
19. Proposed Depth 10104 MD 9982 TVD	20. BLM/BIA Bond No. on file WYB000291	21. Elevations (Show whether DF, KB, RT, GL, etc.) 5119 GL
22. Approximate date work will start 08/08/2012	23. Estimated duration 60-90 DAYS	

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- |   |  |
|---|--|
| 1. Well plat certified by a registered surveyor.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan.   | 5. Operator certification  |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature (Electronic Submission)	Name (Printed/Typed) GINA T BECKER Ph: 720-929-6086	RECEIVED AUG 27 2012	Date 02/16/2012
Title REGULATORY ANALYST II			
Approved by (Signature) 	Name (Printed/Typed) Jerry Kenczka	DIV. OF OIL, GAS & MINING	Date AUG 17 2012
Title Assistant Field Manager Lands & Mineral Resources		Office VERNAL FIELD OFFICE	

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Additional Operator Remarks (see next page)

UDOGM

Electronic Submission #131119 verified by the BLM Well Information System  
For KERR-MCGEE OIL & GAS ONSHORE, sent to the Vernal

NOTICE OF APPROVAL

CONDITIONS OF APPROVAL ATTACHED

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

12TV 15138A

RK-11/29/11



UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
VERNAL FIELD OFFICE

170 South 500 East

VERNAL, UT 84078

(435) 781-4400



**CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL**

Company: Kerr McGee Oil & Gas Onshore  
Well No: NBU 1022-3L3DS  
API No: 43-047-50491

Location: SWSW, Sec. 14, T10S, R22E  
Lease No: UTU-01191  
Agreement: Natural Buttes

**OFFICE NUMBER: (435) 781-4400**

**OFFICE FAX NUMBER: (435) 781-3420**

**A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR  
FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

**NOTIFICATION REQUIREMENTS**

- |   |   |
|---|---|
| Location Construction<br>(Notify Environmental Scientist)       | - Forty-Eight (48) hours prior to construction of location and access roads.  |
| Location Completion<br>(Notify Environmental Scientist)         | - Prior to moving on the drilling rig.  |
| Spud Notice<br>(Notify Petroleum Engineer)                      | - Twenty-Four (24) hours prior to spudding the well.  |
| Casing String & Cementing<br>(Notify Supv. Petroleum Tech.)     | - Twenty-Four (24) hours prior to running casing and cementing all casing strings to:<br><a href="mailto:blm_ut_vn_opreport@blm.gov">blm_ut_vn_opreport@blm.gov</a> |
| BOP & Related Equipment Tests<br>(Notify Supv. Petroleum Tech.) | - Twenty-Four (24) hours prior to initiating pressure tests.  |
| First Production Notice<br>(Notify Petroleum Engineer)          | - Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.                      |

***SURFACE USE PROGRAM  
CONDITIONS OF APPROVAL (COAs)***

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.

**Site Specific COA's**

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horse power must not emit more than 2 grams of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower-hour.
- All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 grams of NO<sub>x</sub> per horsepower-hour.
- The following would be used as standard operating procedures: Green completion or controlled VOC emissions methods with 90% efficiency for Oil or Gas Atmospheric Storage Tanks, VOC Venting controls or flaring, Glycol Dehydration and Amine Unites, Well Completion, Re-Completion, Venting, and Planned Blowdown Emissions.
- All reclamation activities will comply with the Green River Reclamation Guidelines.
- All vehicles and equipment shall be cleaned either through power-washing, or other approved method, if the vehicles or equipment were previously operated outside the Uinta Basin, to prevent weed seed introduction.
- All disturbance areas shall be monitored for noxious weeds annually, for a minimum of three growing seasons following completion of project or until desirable vegetation is established.
- Noxious and invasive weeds will be controlled by the proponent throughout the area of project disturbance.
- Noxious weeds will be inventoried and reported to BLM in the annual reclamation report. Where an integrated pest management program is applicable, coordination has been undertaken with the state and local management program (if existing). A copy of the pest management plan will be submitted for each project.

- A pesticide use proposal (PUP) will be obtained for the project, by the proponent if applicable.
- A permitted paleontologist is to be present to monitor construction at all well pads during all surface disturbing activities: examples include the following; building of the well pad, access road, and pipelines.

To maintain compliance with current cactus survey protocols, the following measures will be required.

- If construction does not occur within 4 years of the original survey date, new 100% clearance surveys will be required.
- Prior to construction within 4 years of the original survey date, a spot check survey will be required during the year of construction. KMG and their respective 3<sup>rd</sup> party surveyor will refer to the current *Sclerocactus* Spot Check Survey Methods, to determine site specific survey distances and intensity levels.
- Spot check reports will be reported to the BLM and the US Fish and Wildlife Service.
- Construction will not commence until written approval is received from the BLM.
- *Discovery Stipulation*: Reinitiation of section 7 consultation with the USFWS will be sought immediately if any loss of plants or occupied habitat for Uinta Basin hookless cactus is anticipated as a result of project activities.
- Construction or drilling is not allowed from January 1 – August 31 on the NBU 1022-3O pad to minimize impacts during golden eagle nesting.
- If it is anticipated that construction or drilling will occur during the given timing restriction, a BLM or qualified biologist shall be notified to conduct surveys for raptors. Depending upon the results of the surveys, permission to proceed may or may not be granted by the Authorized Officer.
- The best method to avoid entrainment is to pump from an off-channel location – one that does not connect to the river during high spring flows. An infiltration gallery constructed in a BLM and Service approved location is best.
- If the pump head is located in the river channel where larval fish are known to occur, the following measures apply:
  - a. do not situate the pump in a low-flow or no-flow area as these habitats tend to concentrate larval fishes;
  - b. limit the amount of pumping, to the greatest extent possible, during that period of the year when larval fish may be present (April 1 to August 31); and
  - c. limit the amount of pumping, to the greatest extent possible, during the pre-dawn hours as larval drift studies indicate that this is a period of greatest daily activity.
- Screen all pump intakes with 3/32 inch mesh material.
- Approach velocities for intake structures will follow the National Marine Fisheries Service's document "Fish Screening Criteria for Anadromous Salmonids". For projects with an in-stream intake that operate in stream reaches where larval fish may be present, the approach velocity will not exceed 0.33 feet per second (ft/s).

- Report any fish impinged on the intake screen to the Service (801.975.3330) and the Utah Division of Wildlife Resources:  
Northeastern Region  
152 East 100 North, Vernal, UT 84078  
Phone: (435) 781-9453
- Kerr McGee can only use the following water source:  
Permit # 49-2307 JD Field Services Green River-Section 15, T2N, R22E

**DOWNHOLE PROGRAM  
CONDITIONS OF APPROVAL (COAs)**

**SITE SPECIFIC DOWNHOLE COAs:**

- A copy of Kerr McGee's Standard Operating Practices (SOP version: dated 7/17/08 and approved 7/28/08) shall be on location.
- Surface casing cement shall be brought to surface.
- Production casing cement shall be brought 200' up and into the surface casing.
- Electronic/mechanical mud monitoring equipment shall be required, from surface casing shoe to TD, which shall include as a minimum: pit volume totalizer (PVT); stroke counter; and flow sensor.

**All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to.** The following items are emphasized:

**DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.

- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well in LAS format to BLM\_UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

## OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at [www.ONRR.gov](http://www.ONRR.gov).
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs,

core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 01191
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-3L3DS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0625 FSL 0624 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 03 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047504910000
<b>PHONE NUMBER:</b> 720 929-6511		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	
<input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 2/6/2013	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>	
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> MIRU TRIPLE A BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 CONDUCTOR PIPE. CEMENT WITH 28 SACKS READY MIX. SPUD WELL LOCATION ON February 6, 2013 AT 13:30 HRS.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> February 11, 2013		
<b>NAME (PLEASE PRINT)</b> Lindsey Frazier	<b>PHONE NUMBER</b> 720 929-6857	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A	<b>DATE</b> 2/11/2013	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 01191
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-3L3DS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0625 FSL 0624 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWSW Section: 03 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047504910000
<b>PHONE NUMBER:</b> 720 929-6511		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 1/21/2013  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION         </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input checked="" type="checkbox"/> OTHER         </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION         </div> </div>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <p>The operator wishes to correct the Surface Quarter-Quarter for this location. The plat was attached to the sundry that was approved on June 4, 2012. / From: NWSW To: SWSW</p> </div> <div style="width: 35%; text-align: center;"> <p><b>Accepted by the Utah Division of Oil, Gas and Mining</b></p> <p><b>FOR RECORD ONLY</b></p> <p>February 20, 2013</p> </div> </div>		
<b>NAME (PLEASE PRINT)</b> Gina Becker	<b>PHONE NUMBER</b> 720 929-6086	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A	<b>DATE</b> 1/21/2013	

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 6

**ENTITY ACTION FORM**

Operator: KERR MCGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995  
Address: P.O. Box 173779  
city DENVER  
state CO zip 80217 Phone Number: (720) 929-6857

**Well 1**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750493	NBU 1022-3M1DS		N WSW	3	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	2900	2/6/2013		2/19/2013		
<b>Comments:</b> MIRU TRIPLE A BUCKET RIG. SPUD WELL LOCATION ON February 6, 2013 AT 09:00 HRS. <u>WSMVD</u>							

**Well 2**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750491	NBU 1022-3L3DS		N WSW	3	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	2900	2/6/2013		2/19/2013		
<b>Comments:</b> MIRU TRIPLE A BUCKET RIG. SPUD WELL LOCATION ON February 6, 2013 AT 13:30 HRS. <u>WSMVD</u>							

**Well 3**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750494	NBU 1022-3M2DS		N WSW	3	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	2900	2/7/2013		2/19/2013		
<b>Comments:</b> MIRU TRIPLE A BUCKET RIG. SPUD WELL LOCATION ON February 7, 2013 AT 08:30 HRS. <u>WSMVD</u>							

**ACTION CODES:**

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

Lindsey Frazier

Name (Please Print)

Signature

REGULATORY ANALYST II

Title

2/11/2013

Date

**RECEIVED**

**FEB 11 2013**

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 6

**ENTITY ACTION FORM**

Operator: KERR MCGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995  
Address: P.O. Box 173779  
city DENVER  
state CO zip 80217 Phone Number: (720) 929-6857

**Well 1**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750493	NBU 1022-3M1DS		N WSW	3	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	2900	2/6/2013		2/19/2013		
<b>Comments:</b> MIRU TRIPLE A BUCKET RIG. SPUD WELL LOCATION ON February 6, 2013 AT 09:00 HRS. <u>WSMVD</u>							

**Well 2**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750491	NBU 1022-3L3DS		N WSW	3	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	2900	2/6/2013		2/19/2013		
<b>Comments:</b> MIRU TRIPLE A BUCKET RIG. SPUD WELL LOCATION ON February 6, 2013 AT 13:30 HRS. <u>WSMVD</u>							

**Well 3**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750494	NBU 1022-3M2DS		N WSW	3	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	2900	2/7/2013		2/19/2013		
<b>Comments:</b> MIRU TRIPLE A BUCKET RIG. SPUD WELL LOCATION ON February 7, 2013 AT 08:30 HRS. <u>WSMVD</u>							

**ACTION CODES:**

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

Lindsey Frazier

Name (Please Print)

Signature

REGULATORY ANALYST II

Title

2/11/2013

Date

**RECEIVED**

**FEB 11 2013**

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 01191
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-3L3DS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0625 FSL 0624 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWSW Section: 03 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047504910000
<b>5. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 6/5/2013	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. No activity for the month of May 2013. Well TD at Drilled to 2,530 ft.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> June 06, 2013		
<b>NAME (PLEASE PRINT)</b> Teena Paulo	<b>PHONE NUMBER</b> 720 929-6236	<b>TITLE</b> Staff Regulatory Specialist
<b>SIGNATURE</b> N/A	<b>DATE</b> 6/5/2013	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 01191
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-3L3DS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0625 FSL 0624 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWSW Section: 03 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047504910000
<b>10. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 7/1/2013	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b>  Drilled to 8,934 ft. in June 2013.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> July 02, 2013		
<b>NAME (PLEASE PRINT)</b> Teena Paulo	<b>PHONE NUMBER</b> 720 929-6236	<b>TITLE</b> Staff Regulatory Specialist
<b>SIGNATURE</b> N/A	<b>DATE</b> 7/1/2013	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 01191
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-3L3DS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0625 FSL 0624 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWSW Section: 03 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047504910000
<b>PHONE NUMBER:</b> 720 929-6511		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 8/5/2013	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Started completing the well. Well TD at 8,934 ft.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> August 07, 2013		
<b>NAME (PLEASE PRINT)</b> Teena Paulo	<b>PHONE NUMBER</b> 720 929-6236	<b>TITLE</b> Staff Regulatory Specialist
<b>SIGNATURE</b> N/A	<b>DATE</b> 8/5/2013	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
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<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-3L3DS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0625 FSL 0624 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWSW Section: 03 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047504910000
<b>PHONE NUMBER:</b> 720 929-6514		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 8/13/2013	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> CHANGE WELL NAME	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input checked="" type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 8/13/2013. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> August 21, 2013		
<b>NAME (PLEASE PRINT)</b> Teena Paulo	<b>PHONE NUMBER</b> 720 929-6236	<b>TITLE</b> Staff Regulatory Specialist
<b>SIGNATURE</b> N/A	<b>DATE</b> 8/14/2013	

Form 3160-4  
(August 2007)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

## WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Dry <input type="checkbox"/> Other b. Type of Completion <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Work Over <input type="checkbox"/> Deepen <input type="checkbox"/> Plug Back <input type="checkbox"/> Diff. Resvr. Other _____				5. Lease Serial No. UTU01191	
2. Name of Operator KERR-MCGEE OIL AND GAS ONSHORE				6. If Indian, Allottee or Tribe Name	
3. Address   P.O. BOX 173779 DENVER, CO 82017				7. Unit or CA Agreement Name and No. UTU63047A	
4. Location of Well (Report location clearly and in accordance with Federal requirements)*  At surface   SWSW 625FSL 624FWL 39.972491 N Lat, 109.433170 W Lon  At top prod interval reported below   NWSW 1424FSL 814FWL  At total depth   NWSW 1387FSL 822FWL				8. Lease Name and Well No. NBU 1022-3L3DS	
14. Date Spudded 02/06/2013		15. Date T.D. Reached 06/08/2013		9. API Well No.  43-047-50491	
16. Date Completed <input type="checkbox"/> D & A <input checked="" type="checkbox"/> Ready to Prod. 08/13/2013		10. Field and Pool, or Exploratory NATURAL BUTTES			
18. Total Depth:   MD 8934 TVD 8828		19. Plug Back T.D.:   MD 8879 TVD 8773		20. Depth Bridge Plug Set:   MD TVD	
21. Type Electric & Other Mechanical Logs Run (Submit copy of each) CBL/GR/CCL/TEMP				22. Was well cored? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis) Was DST run? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis) Directional Survey? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Submit analysis)	

## 23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
20.000	14.000 STL	36.7	0	40		28			
11.000	8.625 J-55	28.0	26	2500		760		0	
7.875	4.500 I-80	11.6	26	8925		1575		1730	

## 24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	8287							

## 25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) WASATCH	5676	6667	5676 TO 6667	0.360	84	OPEN
B) MESAVERDE	6696	8773	6696 TO 8773	0.360	177	OPEN
C)						
D)						

## 26. Perforation Record

## 27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
5676 TO 8773	PUMP 13,575 BBLS SLICK H2O & 330,281 LBS 30/50 OTTAWA SAND

## 28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
08/13/2013	08/17/2013	24		7.0	2358.0	0.0			FLows FROM WELL
Choke Size	Tbg. Press. Flwg. 1661 SI	Csg. Press. 2327.0	24 Hr. Rate	Oil BBL 7	Gas MCF 2358	Water BBL 0	Gas:Oil Ratio	Well Status	PGW

## 28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #219514 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

RECEIVED: Sep. 10, 2013

## 28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

## 28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

29. Disposition of Gas(*Sold, used for fuel, vented, etc.*)  
**SOLD**

## 30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

## 31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
				GREEN RIVER BIRD'S NEST MAHOGANY WASATCH MESAVERDE	1110 1339 2004 4414 6777

## 32. Additional remarks (include plugging procedure):

The first 210 ft. of the surface hole was drilled with a 12 ? in. bit. The remainder of surface hole was drilled with an 11 in. bit. DQX csg was run from surface to 5058 ft.; LTC csg was run from 5058 ft. to 8925 ft. Attached is the chronological well history, perforation report & final survey.

## 33. Circle enclosed attachments:

- |   |                    |               |                       |
|---|--------------------|---------------|-----------------------|
| 1. Electrical/Mechanical Logs (1 full set req'd.)     | 2. Geologic Report | 3. DST Report | 4. Directional Survey |
| 5. Sundry Notice for plugging and cement verification | 6. Core Analysis   | 7 Other:      |                       |

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

**Electronic Submission #219514 Verified by the BLM Well Information System.  
For KERR-MCGEE OIL AND GAS ONSHORE, sent to the Vernal**

Name(*please print*) TEENA PAULOTitle STAFF REGULATORY SPECIALIST

Signature \_\_\_\_\_ (Electronic Submission)

Date 09/09/2013

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**\*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\***

**RECEIVED:** Sep. 10, 2013

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 1022-3L3DS BLUE

Spud Date: 4/29/2013

Project: UTAH-UINTAH

Site: NBU 1022-03M PAD

Rig Name No: PROPETRO 12/12, H&amp;P 298/298

Event: DRILLING

Start Date: 4/11/2013

End Date: 6/9/2013

Active Datum: RKB @5,144.00usft (above Mean Sea Level)

UWI: SW/SW/0/10/S/22/E/3/0/0/26/PM/S/625/W/0/624/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
4/29/2013	6:00 - 8:30	2.50	MIRU	01	B	P	66	RIG UP DIVERTER & FLOW LINE. SPOT RIG MAT OVER WELL. SPOT RIG OVER WELL. SET CAT WALK & PIPE RACKS. HOOK UP AND PRIME PUMP.
	8:30 - 9:00	0.50	MIRU	23		P	66	PRE SPUD SAFETY MEETING WITH RIG CREW, NOV CREW, AND SCIENTIFIC CREW. REVIEW DIRECTIONAL PLANS WITH DIRECTIONAL DRILLERS PRIOR TO SPUD.
	9:00 - 9:30	0.50	DRLSUR	06	A	P	66	PICK UP 12 1/4" BIT & 8" MUD MOTOR. TRIP IN HOLE.
	9:30 - 11:00	1.50	DRLSUR	02	B	P	66	DRILL 12.25" SURFACE HOLE F/44'- T/210' BIT ROP= 166' @ 110.6 FPH WOB= 5-15K. RPM= TOP DRIVE~55 / MOTOR ~83 / TOTAL RPM~138 PUMPING 491 GPM @ 120 SPM STAND PIPE PRESSURE ON/OFF= 800/600 TORQUE ON/OFF = 2,500/1,000 UP/DN/ROT = 22/20/20 NOV ON LINE MUD WT = 8.4
	11:00 - 11:30	0.50	DRLSUR	06	A	P	232	TRIP OUT OF HOLE & LAY DOWN 12.25" BIT
	11:30 - 13:00	1.50	DRLSUR	06	A	P	232	PICK UP 11" BIT & DIRECTIONAL TOOLS, SCRIBE & TRIP IN HOLE
	13:00 - 17:30	4.50	DRLSUR	02	B	P	232	DRILL 11" SURFACE HOLE F/210' -T/720' BIT ROP= 510' @ 113.3 FPH WEIGHT ON BIT = 18-20K. RPM= TOP DRIVE~55 / MOTOR ~83 / TOTAL RPM~138 PUMPING 491GPM @ 120 SPM STANDPIPE PRESSURE ON/OFF= 880/620 TORQUE ON/OFF = 2,900/1,500 UP/DOWN/ ROT= 50/48/49K.-DRAG= 1K NOV ON LINE MUD WT = 8.4 HOLE ISSUES = NONE SLID 75' = 10.37% 2.58' ABOVE AND 1.55' RIGHT OF THE LINE
	17:30 - 0:00	6.50	DRLSUR	02	C	P	742	DRILL 11" SURFACE HOLE F/720' -T/1500' BIT ROP= 780' @ 120 FPH WEIGHT ON BIT = 18-20K. RPM= TOP DRIVE~55 / MOTOR ~83 / TOTAL RPM~138 PUMPING 491GPM @ 120 SPM STANDPIPE PRESSURE ON/OFF= 1160/980 TORQUE ON/OFF = 3,100/1,800 UP/DOWN/ ROT= 71/52/60K.-DRAG= 11K NOV ON LINE MUD WT = 8.4 HOLE ISSUES = NONE SLID 135' = 17.31% 8.22' ABOVE AND 0.71' RIGHT OF THE LINE

## Operation Summary Report

Well: NBU 1022-3L3DS BLUE

Spud Date: 4/29/2013

Project: UTAH-UINTAH

Site: NBU 1022-03M PAD

Rig Name No: PROPETRO 12/12, H&amp;P 298/298

Event: DRILLING

Start Date: 4/11/2013

End Date: 6/9/2013

Active Datum: RKB @5,144.00usft (above Mean Sea Level)

UWI: SW/SW/0/10/S/22/E/3/0/0/26/PM/S/625/W/0/624/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
4/30/2013	0:00 - 5:30	5.50	DRLSUR	02	B	P	1522	DRILL 11" SURFACE HOLE F/1,500' -T/2,040' BIT ROP= 540' @ 90 FPH WEIGHT ON BIT = 18-20K. RPM= TOP DRIVE~55 / MOTOR ~83 / TOTAL RPM~138 PUMPING 491GPM @ 120 SPM STANDPIPE PRESSURE ON/OFF= 1,160/980 TORQUE ON/OFF = 3,100/1,800 UP/DOWN/ ROT= 71/52/60K.-DRAG= 11K NOV ON LINE MUD WT = 8.4 HOLE ISSUES = LOST CIRCULATION @ 1,710' SLID 62' = 12.78% 6.99' ABOVE AND 1.37' LEFT OF THE LINE
	5:30 - 12:00	6.50	DRLSUR	02	B	P	2062	DRILL 11" SURFACE HOLE F/2,040' -T/2,508' BIT ROP= 468' @ 72 FPH WEIGHT ON BIT = 18-20K. RPM= TOP DRIVE~55 / MOTOR ~83 / TOTAL RPM~138 PUMPING 491GPM @ 120 SPM STANDPIPE PRESSURE ON/OFF= 1,340/1,160 TORQUE ON/OFF = 3,100/1,900 UP/DOWN/ ROT= 89/74/77K.-DRAG= 12K NOV ON LINE MUD WT = 8.4 HOLE ISSUES = LOST CIRCULATION @ 1,710' SLID 25' = 4.81% 12.06' ABOVE AND 4.08' RIGHT OF THE LINE
	12:00 - 14:00	2.00	DRLSUR	05	A	P	2530	CIRCULATE AND CONDITION HOLE, RETURNS ARE CLEAN COMING OVER SHAKERS, 4-400 BBL UPRIGHT'S FULL AND 2-400 BBL UPRIGHT'S EMPTY, MUD TANKS FULL.
	14:00 - 15:30	1.50	DRLSUR	06	D	P	2530	TRIP OUT OF HOLE, LAY DOWN DRILL STRING, BOTTOM HOLE ASSEMBLY, DIRECTIONAL TOOLS, MOTOR AND, BIT.
	15:30 - 18:30	3.00	DRLSUR	08	A	Z	2530	***FAILURE: RIG EQUIPMENT - PETOL ARM PIN BROKE - CUT OUT & WELD IN NEW ARM PIN
	18:30 - 19:30	1.00	DRLSUR	06	D	P	2530	FINISH LAYING DOWN BHA, DIRECTIONAL TOOLS, MOTOR, AND BIT
	19:30 - 20:00	0.50	CSGSUR	12	A	P	2530	PRE JOB SAFETY MEETING. MOVE PIPE RACKS AND CATWALK. PULL DIVERTER HEAD. RIG UP TO RUN SURFACE CASING.
	20:00 - 22:30	2.50	CSGSUR	12	C	P	2530	RAN 56 JOINTS (2,480.24') OF 8 5/8", 28#, J-55, LT&C CASING WITH TOPCO FLOAT GUIDE SHOE AND BAFFLE PLATED LOCATED 1 JOINT ABOVE SHOE. 5 CENTRALIZERS SPACED 10' ABOVE SHOE, 2ND & 3RD COLLARS, AND EVERY THIRD COLLAR TO 2,130'. LANDED CASING SHOE AT 2,478'. BAFFLE PLATE AT 2,441'.

## Operation Summary Report

Well: NBU 1022-3L3DS BLUE

Spud Date: 4/29/2013

Project: UTAH-UINTAH

Site: NBU 1022-03M PAD

Rig Name No: PROPETRO 12/12, H&amp;P 298/298

Event: DRILLING

Start Date: 4/11/2013

End Date: 6/9/2013

Active Datum: RKB @5,144.00usft (above Mean Sea Level)

UWI: SW/SW/0/10/S/22/E/3/0/0/26/PM/S/625/W/0/624/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	22:30 - 0:00	1.50	CSGSUR	12	E	P	2530	PRE JOB SAFETY MEETING. RAN 200' OF 1". PIPE DOWN BACK-SIDE OF CASING. PRESSURE TEST LINES TO 1500 PSI. PUMP 140 BBLS OF FRESH WATER CLEARING SHOE. MIX AND PUMP 20 BBLS OF 8.5# GEL WATER FLUSH AHEAD OF CEMENT. MIX AND PUMP 300 SX PREMIUM CEMENT, 61.4 BBLS MIXED AT 15.8 PPG WITH YIELD OF 1.15 CF/SX. DROP PLUG ON FLY. DISPLACE WITH 152 BBLS OF FRESH WATER. NO RETURNS THROUGH OUT JOB. FINAL LIFT OF 200 PSI AT 3 BBL/MINUTE. BUMP PLUG WITH 600 PSI, HELD 600 PSI FOR 5 MINUTES, TESTED FLOAT AND FLOAT HELD. PLUG DOWN AT 23:29, 4/30/2013. MIX AND PUMP TOP JOB # 1 WITH 150 SX PREMIUM CEMENT, 30.7 BBLS MIXED AT 15.8 PPG WITH YIELD OF 1.15 CF/SX. NO RETURNS TO SURFACE. WAIT ON CEMENT 3 HOURS. MIX AND PUMP TOP JOB # 2 WITH 225 SX OF PREMIUN CEMENT, 46.0 BBLS MIXED AT 15.8 PPG WITH YIELD OF 1.15 CF/SX. NO RETURNS TO SURFACE. WAIT ON CEMENT 3 HRS. MIX AND PUMP TOP JOB # 3 WITH 225 SX OF PREMIUN CEMENT, 46.0 BBLS MIXED AT 15.8 PPG WITH YIELD OF 1.15 CF/SX. NO RETURNS TO SURFACE. TOPPED OFF WITH 7.5 YARDS READY MIX, 5/2/2013. HOLE STOOD FULL RELEASE RIG @ 23:59 4/30/2013.
6/6/2013	10:00 - 11:00	1.00	MIRU3	01	C	P	2530	SKID RIG 10' TO NBU 1022-3L3DS, ALIGN OVER WELL
	11:00 - 11:30	0.50	PRPSPD	14	A	P	2530	NIPPLE UP BOPE
	11:30 - 14:30	3.00	PRPSPD	15	A	P	2530	CT JSA W/ A-1TEST SURFACE CASING TO 1500 PSI @ 30 MINUTES - PRESSURE TEST PIPE RAMS, BLIND RAMS, IBOP, FLOOR VALVE, KILL LINES & KILL LINE VALVES, BOP WING VALVES, HCR VALVE + CHOKE LINE; INNER AND OUTER CHOKE VALVES & MANIFOLD TO 250 PSI LOW @ 5 MINUTES + 5000 PSI HIGH @ 10 MINUTES / TEST ANNULAR TO 250 PSI LOW @ 5 MINUTES + 2500 PSI HIGH @ 10 MINUTES / TEST SUPER CHOKE
	14:30 - 15:00	0.50	PRPSPD	15	A	P	2530	TEST SWACO EQUIP TO 1,000 PS1 FOR 10 MIN
	15:00 - 15:30	0.50	PRPSPD	14	B	P	2530	INSTALL WEAR BUSHING
	15:30 - 18:00	2.50	PRPSPD	06	A	P	2530	PICK UP MUD MOTOR, BIT, DIRECTIONAL TOOLS, TIH TO 950', INSTALL ROT.RUBBER TIH TAG @ 2,398'
	18:00 - 19:00	1.00	PRPSPD	07	B	P		LEVEL DERRICK ,PRE SPUD INSPECTION
	19:00 - 20:00	1.00	DRLPRC	02	F	P	2530	TAG CMT @ 2,398 DRILL FLOAT TRACK,BAFFLE @ 2,458 SHOE@ 2,494 NEW HOLE @2,530

API Well Number: 43047504910000

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-3L3DS BLUE

Spud Date: 4/29/2013

Project: UTAH-UINTAH

Site: NBU 1022-03M PAD

Rig Name No: PROPETRO 12/12, H&amp;P 298/298

Event: DRILLING

Start Date: 4/11/2013

End Date: 6/9/2013

Active Datum: RKB @5,144.00usft (above Mean Sea Level)

UWI: SW/SW/0/10/S/22/E/3/0/0/26/PM/S/625/W/0/624/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	20:00 - 0:00	4.00	DRLPRC	02	B	P	2530	DRILL /SLIDE / SURVEY/ F/ 2,530' TO 3,384' = 854' @ 213.5 FPH WOB 18,000-23,000 TOP DRIVE RPM 55-75 MUD MOTOR RPM 123 PUMPS 130 SPM= 585 GPM PUMP PRESSURE ON/OFF BTM 2,150/1,850 TORQUE ON/OFF BTM 8,000/7,000 PICK UP WT 120,000 SLACK OFF WT 85,000 ROT WT 99,000 SLIDES 76' IN 45 MIN 8.9 % OF FOOTAGE DRILLED,16.6 %OF HRS DRILLED 0 BBLS FLUID LOSS PUMPING 5-10 BBL SWEEPS EVERY STAND,W/ 3-4% CAL CARB & ANCO FIBER MUD WT 9.0 VIS 30 NOV-D WATER SWACO OFF LINE
6/7/2013	0:00 - 6:00	6.00	DRLPRC	02	B	P	3384	DRILL /SLIDE / SURVEY/ F/ 3,384 TO 4,530' = 1,146' @ 191.0 FPH WOB 18,000-23,000 TOP DRIVE RPM 55-75 MUD MOTOR RPM 123 PUMPS 130 SPM= 585 GPM PUMP PRESSURE ON/OFF BTM 2,250/1,750 TORQUE ON/OFF BTM 10,000/6,000 PICK UP WT 147,000 SLACK OFF WT 90,000 ROT WT 112,000 SLIDES 87' IN 60 MIN 7.5 % OF FOOTAGE DRILLED,16.6 %OF HRS DRILLED 0 BBLS FLUID LOSS PUMPING 5-10 BBL SWEEPS EVERY STAND,W/ 3-4% CAL CARB & ANCO FIBER MUD WT 9.0 VIS 30 NOV-D WATER SWACO OFF LINE
	6:00 - 14:30	8.50	DRLPRV	02	B	P	4530	DRILL /SLIDE / SURVEY/ F/ 4,530 TO 6,009' = 1,479' @ 174 FPH WOB 21,000-25,000 TOP DRIVE RPM 55-75 MUD MOTOR RPM 123 PUMPS 130 SPM= 585 GPM PUMP PRESSURE ON/OFF BTM 2,280/1,800 TORQUE ON/OFF BTM 9,000/ 5,000 PICK UP WT 162,000 SLACK OFF WT 92,000 ROT WT 118,000 NO SLIDES 0 BBLS FLUID LOSS PUMPING 5-10 BBL SWEEPS EVERY STAND,W/ 3-4% CAL CARB & ANCO FIBER MUD WT 9.0 VIS 30 NOV-D WATER SWACO OFF LINE
	14:30 - 15:00	0.50	DRLPRV	07	A	P	6009	DAILY RIG SERVICE
	15:00 - 0:00	9.00	DRLPRV	02	B	P	6009	DRILL /SLIDE / SURVEY/ F/ 6,009 TO 7,048' = 1,039' @ 109.3 FPH WOB 20,000-28,000 TOP DRIVE RPM 55-75 MUD MOTOR RPM 123 PUMPS 130 SPM= 585 GPM PUMP PRESSURE ON/OFF BTM 2,450/ 2,190 TORQUE ON/OFF BTM 11,000 / 8,000 PICK UP WT 215,000 SLACK OFF WT 148,000 ROT WT 112,000 SLIDES 38' IN 45 MIN 3.65% OF FOOTAGE DRILLED,9.33 %OFHRS DRILLED 50 BBLS FLUID LOSS SEEPAGE / PUMPING 5-10 BBL SWEEPS EVERY STAND,W/ 3-4% CAL CARB & ANCO FIBER MUD WT 9.0 VIS 30 NOV-D WATER SWACO OFF LINE

API Well Number: 43047504910000

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-3L3DS BLUE

Spud Date: 4/29/2013

Project: UTAH-UINTAH

Site: NBU 1022-03M PAD

Rig Name No: PROPETRO 12/12, H&amp;P 298/298

Event: DRILLING

Start Date: 4/11/2013

End Date: 6/9/2013

Active Datum: RKB @5,144.00usft (above Mean Sea Level)

UWI: SW/SW/0/10/S/22/E/3/0/0/26/PM/S/625/W/0/624/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
6/8/2013	0:00 - 6:00	6.00	DRLPRV	02	B	P	7048	DRILL /SLIDE / SURVEY/ F/ 7048 TO 7,750 ' = 702' @ 117 FPH WOB 20,000-28,000 TOP DRIVE RPM 55-75 MUD MOTOR RPM 123 PUMPS 130 SPM= 585 GPM PUMP PRESSURE ON/OFF BTM 2,450/ 2,180 TORQUE ON/OFF BTM 14,000 / 8,000 PICK UP WT 230,000 SLACK OFF WT 130,000 ROT WT 1530,000 SLIDES 30' IN 45 MIN 4.34% OF FOOTAGE DRILLED,12.5 %OFHRS DRILLED 0 BBLs FLUID LOSS SEEPAGE / PUMPING 5-10 BBL SWEEPS EVERY STAND,W/ 3-4% CAL CARB & ANCO FIBER MUD WT 9.0 VIS 30 NOV-D WATER SWACO OFF LINE
	6:00 - 14:00	8.00	DRLPRV	02	B	P	7750	DRILL /SLIDE / SURVEY/ F/ 7,750 TO 8,475 ' = 725' @ 90.6 FPH WOB 20,000-28,000 TOP DRIVE RPM 55-75 MUD MOTOR RPM 123 PUMPS 130 SPM= 585 GPM PUMP PRESSURE ON/OFF BTM 2,450/ 2,190 TORQUE ON/OFF BTM 13,000 / 8,000 PICK UP WT 235,000 SLACK OFF WT 152,000 ROT WT 118,000 NO SLIDES 20 BBLs FLUID LOSS SEEPAGE / PUMPING 5-10 BBL SWEEPS EVERY STAND,W/ 3-4% CAL CARB & ANCO FIBER MUD WT 9.0 VIS 30 NOV-D WATER SWACO OFF LINE
	14:00 - 18:30	4.50	DRLPRV	02	B	P	8435	DRILL /SLIDE / SURVEY/ F/ 8,475 TO 8,934 ' = 459' @ XXX FPH WOB 20,000-28,000 TOP DRIVE RPM 55-75 MUD MOTOR RPM 95 PUMPS 100 SPM= 450 GPM PUMP PRESSURE ON/OFF BTM 2,450/ 2,190 TORQUE ON/OFF BTM 13,000 / 8,000 PICK UP WT 235,000 SLACK OFF WT 152,000 ROT WT 118,000 NO SLIDES 20 BBLs FLUID LOSS SEEPAGE / DISLPAGE HOLE W/ 10.5# / & 11.7# VIS 37 NOV-OFF LINE / SWACO OFF LINE
	18:30 - 19:30	1.00	DRLPRV	05	B	P	8934	CIRC BTMS UP
	19:30 - 20:00	0.50	DRLPRV	06	E	P	8934	SHORT TRIP 6 STDS WITH NO PROBLEMS OR FILL F/ 8,934' TO 8,350' HOLE IN GOOD SHAPE
	20:00 - 21:30	1.50	DRLPRV	05	C	P	8934	CIRC 2 BTMS UP / NO MUD CUT/ 5' FLARE MUD WT 11.8
	21:30 - 0:00	2.50	DRLPRV	06	D	P	8934	TOH F/ CASING, NO PROBLEMS, HOLE TOOK PROPER FLUID, FLOW CHECK @ CSG SHOE,
6/9/2013	0:00 - 1:30	1.50	DRLPRV	06	D	P	8934	TRIP OUT F/ CASING,NO PROBLEM /HOLE TOOK PROPER FLUID, FLOW CHECK @ CSG SHOE,PULL ROT RUBBER,,BREAK BIT LD M MTR,FUNCT TEST PIPE & BLIND RAMS
	1:30 - 2:30	1.00	CSGPRO	14	B	P	8934	PULL WEAR BUSHING/CHANGE OUT DRILLING BAILS
	2:30 - 3:30	1.00	CSGPRO	12	A	P	8934	CTJSA WITH RIG CREW AND FRANKS CASING/ RIG UP CASING EQUIPMENT
	3:30 - 11:00	7.50	CSGPRO	12	C	P	8934	RUN 203 TOTAL JOINTS OF CASING (89JOINTS OF 4.5" / 11.6# / I-80/ LT&C + 1 MARKER) + (114 JOINTS OF 4.5" / 11.6# / I-80/ DQX) + (1-DQX CROSS OVER) / LANDED SHOE @ 8,924.62 / FLOAT COLLAR @ 8879.25/ MESA VERDE MARKER @6801.84 / DQX & LT&C X-OVER JOINT @ 5,058.07

API Well Number: 43047504910000

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-3L3DS BLUE

Spud Date: 4/29/2013

Project: UTAH-UINTAH

Site: NBU 1022-03M PAD

Rig Name No: PROPETRO 12/12, H&amp;P 298/298

Event: DRILLING

Start Date: 4/11/2013

End Date: 6/9/2013

Active Datum: RKB @5,144.00usft (above Mean Sea Level)

UWI: SW/SW/0/10/S/22/E/3/0/0/26/PM/S/625/W/0/624/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	11:00 - 12:00	1.00	CSGPRO	05	D	P	8934	CIRC CASING / RIG DOWN FRANKS CASERS / HSM W/ BJ CEMENTERS / CIRCULATED BOTTOMS UP @80 SPM / 910 PSI / 360 GPM 0 BBLS FLUID LOST WHILE CIRCULATING BOTTOMS UP NO FURTHER LOSSES PRIOR TO CEMENT JOB 5' FLARE ON BOTTOMS UP
	12:00 - 15:00	3.00	CSGPRO	12	E	P	8934	INSTALL BJ CMT HEAD , TEST PUMP & LINES TO 4,500 PSI , DROP BOTTOM PLUG PUMP 25 BBLS FW, PUMP 490 SKS LEAD CEMENT @ 12.5 PPG, 172.8 BBL SLURRY (PREM LITE II + .025 pps CELLO FLAKE + 5 pps KOL SEAL +0.4 bwocFL52+ .05 lb/sx STATIC FREE + 8% bwoc BENTONITE + .2% bwoc SODIUM META SILICATE + 0.35 % R-3 + 101.8% FRESH WATER / (10.44 gal/sx, 1.98 yield) + 1085 SX TAIL @ 14.3 ppg 255.1 BBL SLURRY (CLS G 50/50 POZ + 10% SALT + .005lbs/sx STATIC FREE + .2% R3 +0.5%bwocEC-1+ .002 GPS FP-6L + 2% BENTONITE + 58.9% FW / (5.94 gal/sx, 1.32 yield) / DROP TOP PLUG & DISPLACE W/ 138 BBLS H2O + ADDITIVES / PLUG DOWN @ 14:18 HOURS / FLOATS HELD W/ 1.50 BBLS H2O RETURNED TO INVENTORY/ GOOD CIRC THROUGH OUT 20 BBLS WATER SPACER TO PIT / LIFT PRESSURE @2,502 PSI / BUMP PRESSURE TO 3,085 PSI / TOP OF TAIL CEMENT CALCULATED @ 3,907' / EST TOP OF LEAD @- 117" / JOB WENT WELL WITH NO PROBLEMS / RIG DOWN CMT EQUIPMENT
	15:00 - 16:00	1.00	CSGPRO	12	E	P	8934	FLUSH BOP STACK AND LINES / SET PACK OFF/ LD LANDING JOINT
	16:00 - 17:00	1.00	RDMO	14	A	P	8934	NIPPLE DOWN BOPE,PREP TO SKID, RELEASE RIG TO NBU 1022-3M2DS @ 17:00 6/9/2013

US ROCKIES REGION

1 General

1.1 Customer Information

Company	US ROCKIES REGION		
Representative			
Address			

1.2 Well/Wellbore Information

Well	NBU 1022-3L3DS BLUE	Wellbore No.	OH
Well Name	NBU 1022-3L3DS	Wellbore Name	NBU 1022-3L3DS
Report No.	1	Report Date	7/29/2013
Project	UTAH-UINTAH	Site	NBU 1022-03M PAD
Rig Name/No.		Event	COMPLETION
Start Date	7/4/2013	End Date	8/13/2013
Spud Date	4/29/2013	Active Datum	RKB @5,144.00usft (above Mean Sea Level)
UWI	SW/SW/0/10/S/22/E/3/0/0/26/PM/S/625W/0/624/0/C		

1.3 General

Contractor		Job Method		Supervisor	
Perforated Assembly		Conveyed Method			

1.4 Initial Conditions

Fluid Type		Fluid Density		Gross Interval	5.676.0 (usft)-8,773.0 (usft)	Start Date/Time	7/29/2013 12:00AM
Surface Press		Estimate Res Press		No. of Intervals	67	End Date/Time	7/29/2013 12:00AM
TVD Fluid Top		Fluid Head		Total Shots	261	Net Perforation Interval	85.00 (usft)
Hydrostatic Press		Press Difference		Avg Shot Density	3.07 (shot/ft)	Final Surface Pressure	
Balance Cond	NEUTRAL					Final Press Date	

1.5 Summary

2 Intervals

2.1 Perforated Interval

Date	Formation/Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
7/29/2013 12:00AM	WASATCH/			5,676.0	5,679.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N

US ROCKIES REGION

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
7/29/2013 12:00AM	WASATCH/			5,865.0	5,868.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	WASATCH/			6,048.0	6,050.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	WASATCH/			6,062.0	6,065.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	WASATCH/			6,164.0	6,167.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	WASATCH/			6,266.0	6,268.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	WASATCH/			6,410.0	6,412.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	WASATCH/			6,448.0	6,450.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	WASATCH/			6,488.0	6,490.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	WASATCH/			6,560.0	6,561.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	WASATCH/			6,590.0	6,591.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	WASATCH/			6,638.0	6,639.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	WASATCH/			6,666.0	6,667.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			6,696.0	6,697.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			6,788.0	6,789.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			6,806.0	6,807.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,136.0	7,138.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,182.0	7,184.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,330.0	7,332.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,372.0	7,374.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,414.0	7,415.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,430.0	7,431.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N

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US ROCKIES REGION

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
7/29/2013 12:00AM	MESAVERDE/			7,450.0	7,451.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,468.0	7,469.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,538.0	7,539.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,554.0	7,555.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,590.0	7,592.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,616.0	7,617.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,628.0	7,629.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,655.0	7,656.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,684.0	7,685.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,724.0	7,725.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,754.0	7,755.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,784.0	7,785.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,802.0	7,803.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,842.0	7,843.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,890.0	7,891.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,912.0	7,913.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,920.0	7,921.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,933.0	7,934.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,946.0	7,947.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,954.0	7,955.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			7,964.0	7,965.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N

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US ROCKIES REGION

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
7/29/2013 12:00AM	MESAVERDE/			8,054.0	8,055.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
7/29/2013 12:00AM	MESAVERDE/			8,078.0	8,079.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
7/29/2013 12:00AM	MESAVERDE/			8,110.0	8,111.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
7/29/2013 12:00AM	MESAVERDE/			8,134.0	8,135.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
7/29/2013 12:00AM	MESAVERDE/			8,148.0	8,149.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
7/29/2013 12:00AM	MESAVERDE/			8,186.0	8,187.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
7/29/2013 12:00AM	MESAVERDE/			8,238.0	8,239.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
7/29/2013 12:00AM	MESAVERDE/			8,272.0	8,273.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
7/29/2013 12:00AM	MESAVERDE/			8,319.0	8,320.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
7/29/2013 12:00AM	MESAVERDE/			8,358.0	8,359.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
7/29/2013 12:00AM	MESAVERDE/			8,398.0	8,399.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
7/29/2013 12:00AM	MESAVERDE/			8,422.0	8,423.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
7/29/2013 12:00AM	MESAVERDE/			8,450.0	8,451.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
7/29/2013 12:00AM	MESAVERDE/			8,472.0	8,473.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
7/29/2013 12:00AM	MESAVERDE/			8,500.0	8,501.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
7/29/2013 12:00AM	MESAVERDE/			8,518.0	8,519.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
7/29/2013 12:00AM	MESAVERDE/			8,560.0	8,561.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
7/29/2013 12:00AM	MESAVERDE/			8,576.0	8,577.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
7/29/2013 12:00AM	MESAVERDE/			8,612.0	8,613.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
7/29/2013 12:00AM	MESAVERDE/			8,654.0	8,655.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
7/29/2013 12:00AM	MESAVERDE/			8,693.0	8,694.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	

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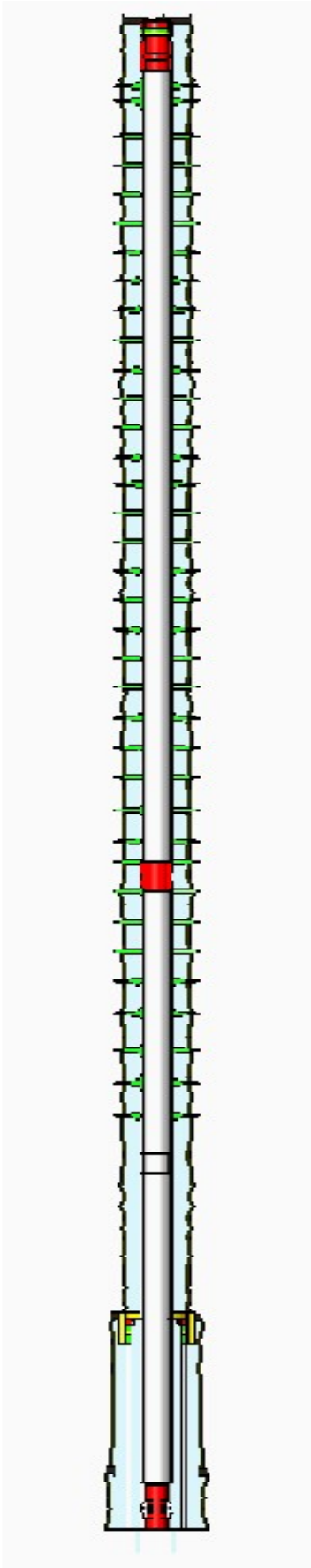
US ROCKIES REGION

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
7/29/2013 12:00AM	MESAVERDE/			8,720.0	8,721.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			8,740.0	8,741.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
7/29/2013 12:00AM	MESAVERDE/			8,772.0	8,773.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N

3 Plots

3.1 Wellbore Schematic



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**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 1022-3L3DS BLUE

Spud Date: 4/29/2013

Project: UTAH-UINTAH

Site: NBU 1022-03M PAD

Rig Name No: SWABBCO 6/6

Event: COMPLETION

Start Date: 7/4/2013

End Date: 8/13/2013

Active Datum: RKB @5,144.00usft (above Mean Sea Level)

UWI: SW/SW/0/10/S/22/E/3/0/0/26/PM/S/625/W/0/624/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
7/4/2013	-							
7/24/2013	7:45 - 8:30	0.75	SUBSPR	52	B	P		FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG & FRAC VALVES 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST 57 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI.  PRESSURE TEST 8 5/8 X 4 1/2 TO 522 PSI HELD FOR 5 MIN LOST -34 PSI,BLED PSI OFF, REINSTALLED POP OFF SWIFN  FILLED SURFACE WITH 3 BBLS NO PRESSURE ON SURFACE
7/26/2013	7:00 - 10:00	3.00	SUBSPR	37		P		PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. RIH PERFWELL, AS PER PERF DESIGN. POOH. SWIFW HSM-JSA
7/29/2013	7:00 - 7:15	0.25	FRAC	48		P		HSM-JSA
	7:15 - 17:30	10.25	FRAC	36	H	P		FRAC STG #1)WHP 1788 PSI, BRK 4438 PSI @ 5 BPM. ISIP 2804 PSI, FG. 0.76 ISIP 2688 PSI, FG. 0.75, NPI -116 PSI, X/O TO WL.  SET CBP & PERF STG #2 AS DESIGNED, X/O TO FRAC.  FRAC STG #2)WHP 1870 PSI, BRK 2773 PSI @ 4.9 BPM. ISIP 2111 PSI, FG. 0.69 ISIP 2862 PSI, FG. 0.78, NPI 751 PSI, X/O TO WL.  SET CBP & PERF STG #3 AS DESIGNED, X/O TO FRAC.  FRAC STG #3)WHP 2030 PSI, BRK 2689 PSI @ 4.4 BPM. ISIP 2106 PSI, FG. 0.7 ISIP 2315 PSI, FG. 0.72, NPI 209 PSI, X/O TO WL.  SET CBP & PERF STG #4 AS DESIGNED, X/O TO FRAC.  FRAC STG #4)WHP 1670 PSI, BRK 3420 PSI @ 4.3 BPM. ISIP 2276 PSI, FG. 0.73 ISIP 2360 PSI, FG. 0.74, NPI 84 PSI, X/O TO WL.  SET CBP & PERF STG #5 AS DESIGNED.  SWIFN. HSM-JSA
7/30/2013	7:00 - 7:15	0.25	FRAC	48		P		HSM-JSA

API Well Number: 43047504910000

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-3L3DS BLUE

Spud Date: 4/29/2013

Project: UTAH-UINTAH

Site: NBU 1022-03M PAD

Rig Name No: SWABBCO 6/6

Event: COMPLETION

Start Date: 7/4/2013

End Date: 8/13/2013

Active Datum: RKB @5,144.00usft (above Mean Sea Level)

UWI: SW/SW/0/10/S/22/E/3/0/0/26/PM/S/625/W/0/624/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:15 - 17:30	10.25	FRAC	36	H	P		FRAC STG #5)WHP 1810 PSI, BRK 2620 PSI @ 5.1 BPM. ISIP 2042 PSI, FG. 0.7 ISIP 2457 PSI, FG. 0.76, NPI 415 PSI, X/O TO WL.  SET CBP & PERF STG #6 AS DESIGNED, X/O TO FRAC.  FRAC STG #6)WHP 1865 PSI, BRK 2057 PSI @ 4.3 BPM. ISIP 1892 PSI, FG. 0.69 ISIP 2421 PSI, FG. 0.76, NPI 529 PSI, X/O TO WL.  SET CBP & PERF STG #7 AS DESIGNED, X/O TO FRAC.  FRAC STG #7)WHP 820 PSI, BRK 2506 PSI @ 4.9 BPM. ISIP 2256 PSI, FG. 0.75 ISIP 2435 PSI, FG. 0.77, NPI 179 PSI, X/O TO WL.  SET CBP & PERF STG #8 AS DESIGNED, X/O TO FRAC.  FRAC STG #8)WHP 285 PSI, BRK 1749 PSI @ 3.9 BPM. ISIP 1259 PSI, FG. 0.63 ISIP 2013 PSI, FG. 0.74, NPI 754 PSI, X/O TO WL.  SET CBP & PERF STG #9 AS DESIGNED.  SWIFN. HSM-JSA
7/31/2013	7:00 - 7:15	0.25	FRAC	48		P		
	7:15 - 14:00	6.75	FRAC	36	H	P		FRAC STG #9)WHP 650 PSI, BRK 2675 PSI @ 4.7 BPM. ISIP 2087 PSI, FG. 0.77 ISIP 2037 PSI, FG. 0.76, NPI -50 PSI, X/O TO WL.  SET CBP & PERF STG #10 AS DESIGNED, X/O TO FRAC.  FRAC STG #10)WHP 1170 PSI, BRK 3040 PSI @ 3.6 BPM. ISIP 1560 PSI, FG. 0.69 ISIP 1853 PSI, FG. 0.74, NPI 293 PSI, X/O TO WL.  SET CBP & PERF STG #11 AS DESIGNED, X/O TO FRAC.  FRAC STG #11)WHP 350 PSI, BRK 1238 PSI @ 6.9 BPM. ISIP 1076 PSI, FG. 0.63 ISIP 1312 PSI, FG. 0.67, NPI 236 PSI, X/O TO WL.  SET KILL PLUG @ 5626', SWI, RDMO FRAC EQUIP & WIRELINE.  TOTAL CLN FLUID- 13575 BBLS TOTAL SAND- 330281 LBS

API Well Number: 43047504910000

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-3L3DS BLUE

Spud Date: 4/29/2013

Project: UTAH-UINTAH

Site: NBU 1022-03M PAD

Rig Name No: SWABBCO 6/6

Event: COMPLETION

Start Date: 7/4/2013

End Date: 8/13/2013

Active Datum: RKB @5,144.00usft (above Mean Sea Level)

UWI: SW/SW/0/10/S/22/E/3/0/0/26/PM/S/625/W/0/624/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
8/12/2013	7:00 - 15:00	8.00	DRLOUT	44	C	P		7AM JSA - PICKING UP TBG, R/U SWVL.  MIRU, SPOT EQUIPMENT. NDWH, NUBOP. R/U FLOOR & TBG EQUIPMENT. PU POBS, 150 JTS 2-3/8' J-55, 1 L-80 PUP JT & 27 JTS L-80 TBG. TAG KILL PLUG @ 5616'. R/U SWVL. TEST BOP TO 3000#. HELD GOOD.  3PM SWI-SDFN. PRPE TO D/O PLUGS IN AM.

API Well Number: 43047504910000

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-3L3DS BLUE

Spud Date: 4/29/2013

Project: UTAH-UINTAH

Site: NBU 1022-03M PAD

Rig Name No: SWABBCO 6/6

Event: COMPLETION

Start Date: 7/4/2013

End Date: 8/13/2013

Active Datum: RKB @5,144.00usft (above Mean Sea Level)

UWI: SW/SW/0/10/S/22/E/3/0/0/26/PM/S/625/W/0/624/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
8/13/2013	7:00 - 16:00	9.00	DRLOUT	44	C	P		<p>7AM JSA -- DRLG PLUGS, PSI, OVERHEAD EQUIP. EOT @ 5616'. ESTB CIRC W/ RIG PMP.</p> <p>DRLG CBP#1 @ 5626'. D/O IN 12 MIN. 0# INC. RIH &amp; C/O 15' SD TO PLUG #2.</p> <p>DRLG CBP#2 @ 5898'. D/O IN 8 MIN. 0# INC. RIH &amp; C/O 20' SD TO PLUG #3.</p> <p>DRLG CBP#3 @ 6193'. D/O IN 7 MIN. 0# INC. RIH &amp; C/O 25' SD TO PLUG #4.</p> <p>DRLG CBP#4 @ 6520'. D/O IN 12 MIN. 0# INC. RIH &amp; C/O 30' SD TO PLUG#5.</p> <p>DRLG CBP#5 @ 6846'. D/O IN 12 MIN. 60# INC. RIH &amp; C/O 30' SD TO PLUG#6.</p> <p>DRLG CBP#6 @ 7394'. D/O IN 15 MIN. 60# INC. RIH &amp; C/O 25 SD TO PLUG#7.</p> <p>DRLG CBP# 7 @ 7604'. D/O IN 12 MIN. 70# INC. RIH &amp; C/O 15' SD TO PLUG#8</p> <p>DRLG CBP #8 @ 7818'. D/O IN 9 MIN. 70# INC. RIH &amp; C/O 15' SD TO PLUG #9.</p> <p>DRLG CBP#9 @ 7995'. D/O IN 12 MIN. 50#INC. RIH &amp; C/O 30' SD TO PLUG #10.</p> <p>DRLG CBP#10 @ 8298'. D/O IN 11 MIN. 50# INC. RIH &amp; C/O 90' TO PLUG #11.</p> <p>DRLG CBP# 11 @ 8539'. D/O IN 10 MIN. 80# INC. RIH, TAG SD @ 8863'. C/O 15' SD TO PBTD @ 8878'. CIRC WELL CLN. R/D SWVL. POOH AND LAND TBG W/ 261 JTS. 111 JTS - L-80, 150 JTS J-55 W/ 6' MARKER SUB BETWEEN TBG GRADES. EOT @ 8286.57'</p> <p>R/D FLOOR AND TBG EQUIP. NDBOP, NUWH. DROP BALL DN TBG. P.T. FLOWLINE TO 3000#. HELD GOOD. PUMP 30 GALLONS OF E1317A NALCO CORR INHIB W/ 32 BBLS TMAC. PMP OFF THE BIT @ 2200#. OPEN WELL TO PITON OPEN CHOKE TO UNLOAD TBG VOLUME. OF 32 BBLS.</p> <p>3PM TURN WELL OVER TO TEAM FBD ABD APD MAINT CREW SELLINF GAS. RIG RECOVERED 2500 BBLS. ORIG LTR=13,575 BBLS. LTR=11,075 BBLS. SDFD.</p> <p>KB-26 HNGR-.83 150 JTS J-55 - 4746.68 1 JT L-80 6.00</p>

API Well Number: 43047504910000

US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-3L3DS BLUE

Spud Date: 4/29/2013

Project: UTAH-UINTAH

Site: NBU 1022-03M PAD

Rig Name No: SWABBCO 6/6

Event: COMPLETION

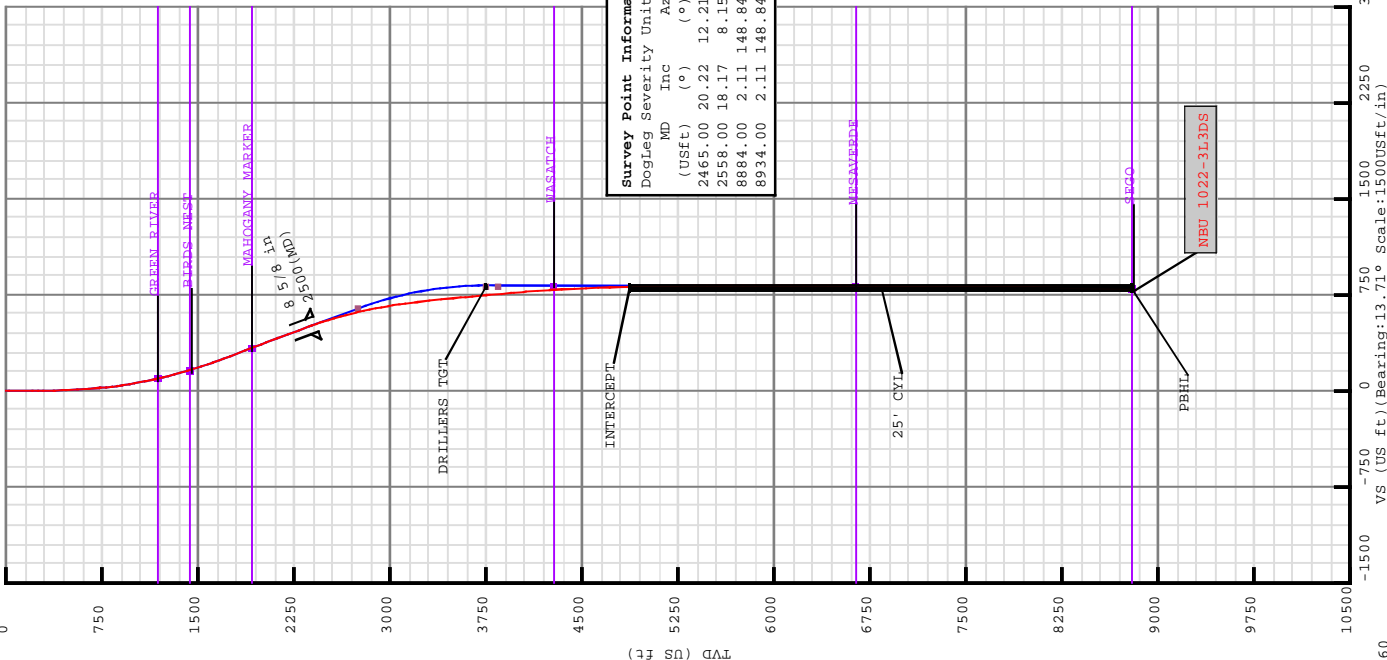
Start Date: 7/4/2013

End Date: 8/13/2013

Active Datum: RKB @5,144.00usft (above Mean Sea Level)

UWI: SW/SW/0/10/S/22/E/3/0/0/26/PM/S/625/W/0/624/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
								111 JTS L-80 - 3504.86 POBS 2.2 EOT @ 8286.57' XN @ 8284.37'
	16:00 - 16:00	0.00	DRLOUT	50				WELL TURNED TO SALES @ 1500 HR ON 8/13/2013. 1500 MCFD, 1920 BWPD, FCP 2305#, FTP 1900#, 20/64" CK.



Survey Data for NBU 1022-3L3DS

**Field: NATURAL BUTTES ANADARKO\_NAD 27**  
 Map Unit: USFT Vertical Reference Datum (VRD): Mean Sea Level  
 Projected Coordinate System: NAD27 / UTM zone 12N

**Site: NBU 1022-3M PAD**  
 Unit: USFeet TVD Reference:  
 Company Name: Anadarko Petroleum  
 Position: Northing: 14519908.97USft Latitude: 39.972550°  
 Easting: 2079601.60USft Longitude: -109.432471°  
 North Reference: True Grid Convergence: 1.01°  
 Elevation Above VRD: 5118.00USft

**Slot: NBU 1022-3L3DS**  
 Position:  
 Offset is from Site centre  
 +N/-S: -8.74USft Northing: 14519900.15USft Latitude: 39.972526°  
 +E/-W: -4.48USft Easting: 2079597.27USft Longitude: -109.432487°  
 Elevation Above VRD: 5118.00USft

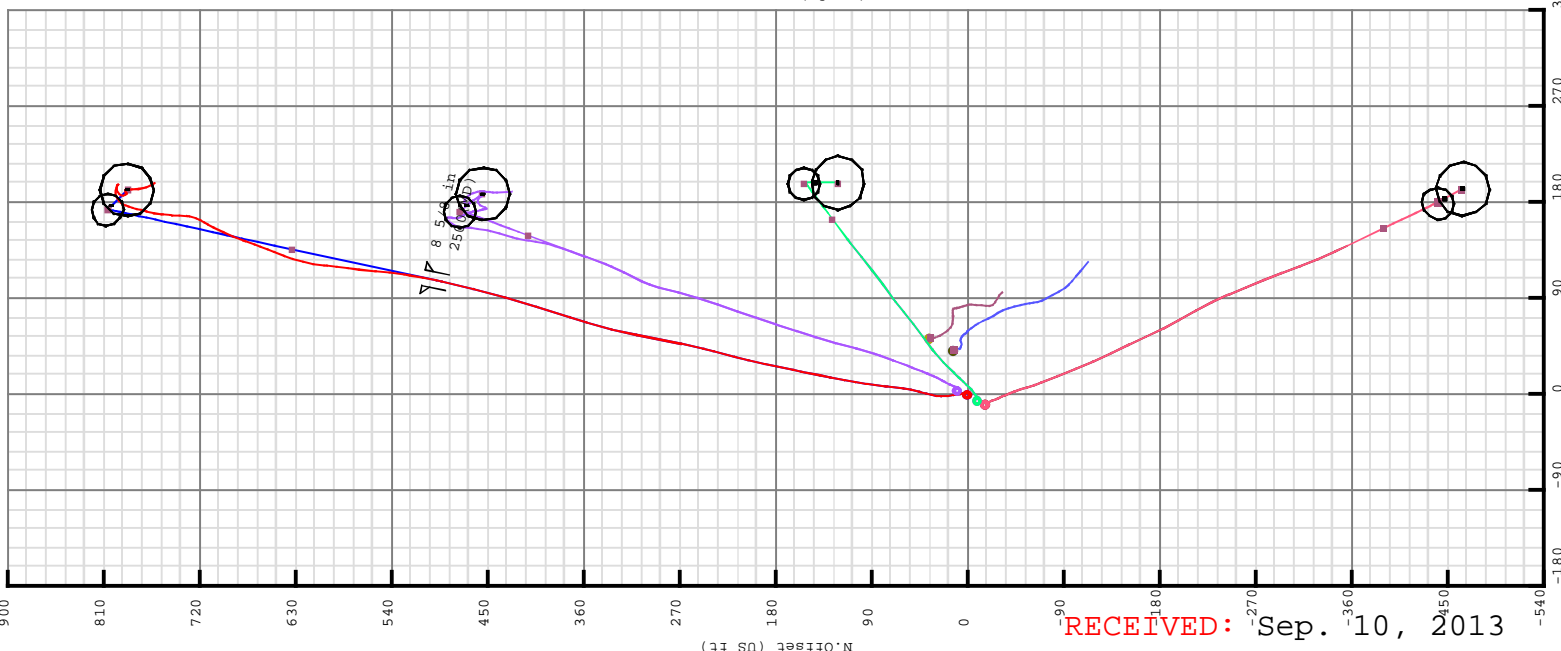
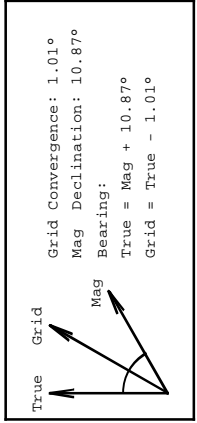
**Well: NBU 1022-3L3DS**  
 Type: Main-Well  
 File Number:  
 Vertical Section: Position offset of origin from Slot centre:  
 +N/-S: 0.00USft Azimuth: 90.00°  
 +E/-W: 0.00USft  
 Magnetic Parameters:  
 Model: Field Strength: Declination: Dip: Date:  
 BGGM 52103(nT) 10.87° 65.80° 2013-05-14

**Target Set Information:**

Name	TVD	Lat	Long
3L3DS	(USft)	(°)	(°)
PBHL	8806.00	39.974687	-109.431802
25' CYL	6845.50	39.974687	-109.431802
DRILLERS TGT	3753.13	39.974739	-109.431870
INTERCEPT	4885.00	39.974728	-109.431855

**Formation Point Information:**

Name	TVD	Elevation	MD
GREEN RIVER	1190.00	3954.00	(USft) (USft)
BIRDS NEST	1447.00	3697.00	1196.98
MAHOGANY MARKER	1924.00	3220.00	1463.15
WASATCH	4285.00	859.00	1970.03
MESAVERDE	6649.00	-1505.00	4389.56
SEGO	8806.00	-3662.00	6754.23
			8911.87



5D Survey Report



**5D Survey Report**

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**Anadarko Petroleum**

**Field Name:** NATURAL BUTTES\_ANADARKO\_NAD 27  
**Site Name:** NBU 1022-3M PAD  
**Well Name:** NBU 1022-3L3DS  
**Survey:** Definitive Survey

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RECEIVED: Sep. 10, 2013



Weatherford International Limited

5D 7.5.4 : 17 July 2013, 19:28:52 UTC

DEFINITIVE SURVEYS FOR THE NBU 1022-3L3DS

Site Name NBU 1022-3M PAD	Units : US ft		North Reference : True		Convergence Angle : 1.01	
	Position		Northing : 14519908.97 US ft		Latitude : 39.972550	
			Easting : 2079601.60 US ft		Longitude : -109.432471	
	Elevation above:5118.00 US ft					
Comment :						
Slot Name NBU 1022-3L3DS	Position (Offsets relative to Site Centre)					
	+ N / - S : -8.74 US ft		Northing :14519900.15 US ft		Latitude : 39.972526	
	+ E / - W : -4.48 US ft		Easting :2079597.27 US ft		Longitude : -109.432487	
	Slot TVD Reference : Ground Elevation					
Elevation above : 5118.00 US ft						
Comment :						
Well Name NBU 1022-3L3DS	Type : Main well		UWI :			
	Rig Height <i>Well TVD Reference</i> : 26.00 US ft		Comment :			
	Relative to : 5144.00 US ft		Closure Azimuth : 14.534°			
	Closure Distance : 787.652 US ft					
Vertical Section (Position of Origin Relative to Slot )						
+N / -S : 0.00 US ft						
+E / -W : 0.00 US ft						
Az :13.71°						

Target Set
Name : 3L3DS      Number of Targets : 4

Comment :	
Target Name: PBHL	Position (Relative to centre) Northing : 14520690.46 US ft Easting : 2079775.36 US ft Latitude : 39°58'28.873200" Longitude : -109°25'54.487200"
Shape: Cuboid	
TVD (Well TVD Reference) : 8806.00 US ft	
Orientation Dimensions	Azimuth : 0.00° Length : 1.00 US ft Inclination : 0.00° Breadth : 1.00 US ft Height : 1.00 US ft

5D Survey Report

<b>TargetName:</b> INTERCEPT  <b>Shape:</b> Cuboid	<b>+ N / -S :</b> 802.03US ft <b>+ E / -W :</b> 177.09 US ft <b>TVD (Well TVD Reference) :</b> 4885.00 US ft  <b>Orientation</b> <b>Dimensions</b> <b>Azimuth :</b> 0.00° <b>Length :</b> 1.00 US ft  <b>Inclination :</b> 0.00° <b>Breadth :</b> 1.00 US ft  <b>Height :</b> 1.00 US ft  <b>Position (Relative to centre)</b> <b>Northing :</b> 14520705.17 US ft <b>Easting :</b> 2079760.23US ft  <b>Latitude :</b> 39°58'29.021150" <b>Longitude :</b> -109°25'54.678156"
<b>Target Name:</b> 25' CYL  <b>Shape:</b> Cylinder	<b>+ N / -S :</b> 787.06US ft <b>+ E / -W :</b> 191.95US ft <b>TVD (Well TVD Reference) :</b> 6845.50 US ft  <b>Orientation</b> <b>Dimensions</b> <b>Azimuth :</b> 1.01° <b>Radius :</b> 25.00 US ft  <b>Inclination :</b> 0.00° <b>Length :</b> 3921.00 US ft  <b>Position (Relative to centre)</b> <b>Northing :</b> 14520690.46US ft <b>Easting :</b> 2079775.36 US ft  <b>Latitude :</b> 39°58'28.873180" <b>Longitude :</b> -109°25'54.487253"
<b>Target Name:</b> DRILLERS TGT  <b>Shape:</b> Cylinder	<b>+ N / -S :</b> 806.15US ft <b>+ E / -W :</b> 172.99US ft <b>TVD (Well TVD Reference) :</b> 3753.13 US ft  <b>Orientation</b> <b>Dimensions</b> <b>Azimuth :</b> 1.01° <b>Radius :</b> 15.00 US ft  <b>Inclination :</b> 0.00° <b>Length :</b> 1.00 US ft  <b>Position (Relative to centre)</b> <b>Northing :</b> 14520709.22US ft <b>Easting :</b> 2079756.06 US ft  <b>Latitude :</b> 39°58'29.061874" <b>Longitude :</b> -109°25'54.730828"

<b>Survey Name :</b> Definitive Survey			
<b>Date :</b> 21/May/2013	<b>Survey Tool :</b>	<b>Comment :</b>	<b>Company :</b>
<b>Magnetic Model</b>			
<b>Model Name:</b> BGGM	<b>Date:</b> 14/May/2013	<b>Field Strength:</b> 52103.2 nT	<b>Declination:</b> 10.87° <b>Dip:</b> 65.80°
<b>Survey Tool Ranges</b>			
<b>Name</b>	<b>Start MD (us ft)</b>	<b>End MD (us ft)</b>	<b>Source Survey</b>
MWC	0.00	2465.00	SDI SURFACE
MWC	2465.00	8934.00	WFT MWD SURVEY

5D Survey Report

Well path created using minimum curvature

Survey Points (Relative to centre, TVD relative to Well TVD Reference )														
MLC (US ft)	Inc (°)	Az (°)	IVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Latitude (°)	Longitude (°)	DLS (°/100 US ft)	T.Face (°)	CL (US ft)	VS (US ft)	High to Plan (US ft)	Right to Plan (US ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	39.972526	-109.432487	0.00	0.00	0.00	0.00	0.00	0.00	
22.00	0.00	0.00	22.00	0.00	0.00	39.972526	-109.432487	0.00	0.00	22.00	0.00	0.00	0.00	
26.00	0.00	0.00	26.00	0.00	0.00	39.972526	-109.432487	0.00	0.00	4.00	0.00	0.00	0.00	
207.00	0.53	165.76	207.00	-0.81	0.21	39.972524	-109.432486	0.29	165.76	181.00	-0.74	-0.00	0.00	
294.00	1.38	13.74	293.99	-0.18	0.55	39.972526	-109.432485	2.14	200.32	87.00	-0.05	-0.00	0.00	
380.00	2.29	355.16	379.95	2.53	0.65	39.972533	-109.432485	1.25	317.31	86.00	2.62	-0.00	0.00	
470.00	3.69	349.45	469.82	7.17	-0.03	39.972546	-109.432487	1.59	345.13	90.00	6.96	-0.00	0.00	
560.00	3.69	351.29	559.64	12.88	-1.00	39.972561	-109.432491	0.13	90.92	90.00	12.28	-0.00	0.00	
650.00	4.04	351.38	649.43	18.88	-1.91	39.972578	-109.432494	0.39	1.04	90.00	17.89	-0.00	0.00	
740.00	4.68	2.89	739.17	25.68	-2.20	39.972597	-109.432495	1.20	59.65	90.00	24.43	-0.00	0.00	
830.00	6.50	13.47	828.74	34.30	-0.83	39.972620	-109.432490	2.32	34.86	90.00	33.13	-0.00	0.00	
920.00	8.72	14.54	917.94	45.86	2.07	39.972652	-109.432480	2.47	4.18	90.00	45.05	-0.00	0.00	
1010.00	10.29	8.26	1006.71	60.42	4.94	39.972692	-109.432469	2.09	323.43	90.00	59.87	-0.00	0.00	
1100.00	11.34	6.76	1095.11	77.17	7.14	39.972738	-109.432462	1.21	344.26	90.00	76.66	-0.00	0.00	
1190.00	12.40	7.55	1183.18	95.53	9.45	39.972788	-109.432453	1.19	9.10	90.00	95.05	-0.00	0.00	
1280.00	14.13	11.17	1270.78	115.89	12.85	39.972844	-109.432441	2.13	27.42	90.00	115.63	-0.00	0.00	
1370.00	15.83	11.68	1357.72	138.69	17.46	39.972907	-109.432425	1.89	4.68	90.00	138.88	-0.00	0.00	
1460.00	17.23	11.08	1444.00	163.79	22.51	39.972976	-109.432407	1.57	352.76	90.00	164.46	-0.00	0.00	
1550.00	17.88	12.15	1529.80	190.38	27.98	39.973049	-109.432387	0.81	26.92	90.00	191.59	-0.00	0.00	
1640.00	19.35	15.24	1615.10	218.28	34.80	39.973125	-109.432363	1.97	35.33	90.00	220.31	-0.00	0.00	
1730.00	20.66	13.27	1699.66	248.12	42.37	39.973207	-109.432336	1.64	331.85	90.00	251.09	-0.00	0.00	
1790.00	20.66	11.42	1755.81	268.80	46.89	39.973264	-109.432320	1.09	269.13	60.00	272.25	-0.00	0.00	
1910.00	21.00	11.25	1867.96	310.63	55.28	39.973379	-109.432290	0.29	349.84	120.00	314.89	-0.00	0.00	
2090.00	21.19	18.63	2035.93	379.11	71.97	39.973550	-109.432230	1.48	89.36	180.00	379.53	-0.00	0.00	
2180.00	20.66	16.34	2120.00	403.76	81.63	39.973635	-109.432196	1.08	235.99	90.00	411.60	-0.00	0.00	
2270.00	20.05	15.90	2204.38	433.83	90.32	39.973717	-109.432165	0.70	193.88	90.00	442.88	-0.00	0.00	
2360.00	19.68	14.08	2289.02	463.37	98.24	39.973798	-109.432136	0.80	238.26	90.00	473.45	-0.00	0.00	
2450.00	20.40	12.43	2373.57	493.38	105.30	39.973881	-109.432111	1.02	321.08	90.00	504.28	-0.00	0.00	
2465.00	20.22	12.21	2387.64	498.47	106.41	39.973895	-109.432107	1.30	202.89	15.00	509.49	-0.00	0.00	
2558.00	18.17	8.15	2475.47	528.54	111.87	39.973977	-109.432088	2.63	211.17	93.00	539.99	1.62	1.14	
2652.00	16.32	4.82	2565.24	556.21	115.05	39.974053	-109.432076	2.23	206.50	94.00	567.63	6.18	4.54	
2747.00	14.73	7.84	2656.77	581.48	117.82	39.974123	-109.432067	1.88	154.50	95.00	592.83	14.05	7.43	
2841.00	12.57	5.23	2748.11	603.50	120.39	39.974183	-109.432057	2.39	194.65	94.00	614.84	24.07	11.40	
2936.00	11.94	14.05	2840.96	623.33	123.71	39.974237	-109.432046	2.08	112.87	95.00	634.89	37.90	8.34	
3030.00	10.85	21.99	2933.11	640.97	129.39	39.974286	-109.432025	2.03	128.64	94.00	653.38	48.97	-0.33	
3125.00	9.15	20.90	3026.66	656.32	135.43	39.974328	-109.432004	1.80	185.82	95.00	669.72	58.51	-3.61	
3219.00	7.18	19.59	3119.70	668.84	140.07	39.974362	-109.431987	2.10	184.75	94.00	682.98	67.97	-5.46	
3314.00	5.99	18.05	3214.08	679.14	143.59	39.974391	-109.431975	1.27	187.68	95.00	693.83	77.20	-5.90	
3408.00	6.61	24.55	3307.51	686.73	147.36	39.974417	-109.431961	1.00	52.26	94.00	704.03	82.29	-17.56	

Weatherford International Limited

5D 7.5.4 : 17 July 2013, 19:28:52 UTC

5D Survey Report

Survey Points (Relative to centre, TVD relative to Well TVD Reference )																	
MC (US ft)	Inc (°)	Az (°)	TVD (US ft)	N. Offset (US ft)	E. Offset (US ft)	altitude (°)	Longitude (°)	DLS (°/100 US ft)	T. Face (°)	CI (US ft)	V/S (US ft)	High to Plan (US ft)	Right to Plan (US ft)	Comment			
3503.00	5.72	26.32	3401.96	697.95	151.73	39.974442	-109.431946	0.96	168.82	95.00	714.02	84.79	-23.32				
3597.00	6.55	24.09	3495.42	707.04	156.00	39.974467	-109.431930	0.92	342.87	94.00	723.87	85.69	-22.40				
3692.00	5.31	34.98	3589.91	715.59	160.73	39.974491	-109.431913	1.76	143.11	95.00	733.29	76.81	-39.96				
3787.00	5.82	16.88	3684.47	723.80	164.65	39.974513	-109.431899	1.91	277.07	95.00	742.20	80.14	-15.86				
3881.00	4.58	11.06	3778.08	733.04	166.75	39.974536	-109.431892	1.43	200.16	94.00	750.71	73.68	-8.08				
3976.00	4.57	357.59	3872.78	739.55	167.32	39.974557	-109.431890	1.13	262.76	95.00	758.13	65.80	8.71				
4070.00	5.64	5.28	3966.41	747.89	167.59	39.974579	-109.431889	1.35	36.47	94.00	766.30	57.65	0.68				
4165.00	4.47	2.55	4061.04	756.24	168.18	39.974602	-109.431887	1.26	190.26	95.00	774.55	48.98	3.60				
4259.00	4.59	15.75	4154.75	763.52	169.37	39.974622	-109.431883	1.11	90.04	94.00	781.90	40.95	-6.45				
4354.00	3.56	13.12	4249.51	770.05	171.07	39.974640	-109.431877	1.10	188.97	95.00	788.65	34.25	-4.30				
4448.00	2.75	14.75	4343.36	775.07	172.31	39.974654	-109.431872	0.87	174.49	94.00	793.82	28.72	-4.75				
4542.00	2.50	14.87	4437.26	779.23	173.41	39.974666	-109.431868	0.27	178.80	94.00	798.13	24.16	-4.37				
4637.00	2.38	17.37	4532.18	783.12	174.53	39.974676	-109.431864	0.17	139.67	95.00	802.17	19.68	-4.88				
4731.00	2.06	14.37	4626.11	786.62	175.53	39.974686	-109.431861	0.36	198.46	94.00	805.81	16.02	-3.51				
4825.00	1.81	24.12	4720.05	789.61	176.55	39.974694	-109.431857	0.44	132.02	94.00	808.96	11.86	-5.42				
4920.00	1.63	31.37	4815.01	792.13	177.87	39.974701	-109.431852	0.30	133.18	95.00	811.72	8.13	-6.19				
5014.00	1.31	41.00	4908.98	794.08	179.27	39.974706	-109.431847	0.43	147.08	94.00	813.95	4.55	-6.73				
5108.00	1.25	49.37	5002.96	795.56	180.76	39.974710	-109.431842	0.21	111.95	94.00	815.74	1.47	-6.66				
5203.00	1.00	61.50	5097.94	796.63	182.27	39.974713	-109.431837	0.36	142.35	95.00	817.13	-1.66	-6.11				
5297.00	0.94	53.50	5191.93	797.48	183.61	39.974716	-109.431832	0.16	242.14	94.00	818.28	-2.30	-5.90				
5392.00	1.06	66.75	5286.91	798.29	185.04	39.974718	-109.431827	0.27	69.30	95.00	819.40	-5.04	-4.56				
5486.00	1.10	80.74	5380.90	798.78	186.73	39.974719	-109.431821	0.28	88.41	94.00	820.28	-7.45	-2.58				
5581.00	1.10	85.87	5475.88	798.99	188.54	39.974720	-109.431814	0.10	92.56	95.00	820.91	-9.14	-1.44				
5675.00	1.00	95.00	5569.86	798.99	190.26	39.974720	-109.431808	0.21	125.38	94.00	821.32	-10.57	0.50				
5770.00	1.14	102.03	5664.85	798.72	192.01	39.974719	-109.431802	0.20	46.71	95.00	821.47	-11.77	2.17				
5865.00	1.20	114.55	5759.83	798.11	193.84	39.974717	-109.431795	0.28	83.10	95.00	821.31	-12.46	5.06				
5959.00	1.19	125.50	5853.81	797.13	195.53	39.974715	-109.431789	0.24	97.97	94.00	820.76	-12.72	7.60				
6053.00	0.30	311.58	5947.80	796.73	196.14	39.974714	-109.431787	1.58	181.22	94.00	820.51	12.06	-9.04				
6148.00	0.25	333.50	6042.80	797.08	195.86	39.974715	-109.431788	0.12	126.11	95.00	820.79	6.89	-12.64				
6242.00	0.25	17.99	6136.80	797.46	195.83	39.974716	-109.431788	0.05	112.24	94.00	821.15	-4.52	-13.25				
6337.00	0.20	21.78	6231.80	797.81	195.96	39.974717	-109.431788	0.25	165.31	95.00	821.52	-5.96	-12.44				
6431.00	0.10	100.28	6325.80	797.95	196.10	39.974717	-109.431787	0.22	151.44	94.00	821.69	-13.08	3.81				
6526.00	0.19	144.40	6420.80	797.80	196.27	39.974716	-109.431787	0.14	74.61	95.00	821.59	-6.45	11.82				
6620.00	0.33	150.08	6514.80	797.44	196.50	39.974716	-109.431786	0.15	13.28	94.00	821.29	-5.18	12.29				
6714.00	1.48	288.23	6608.79	797.59	195.48	39.974716	-109.431789	1.85	145.42	94.00	821.19	10.59	-5.74				
6809.00	1.25	273.25	6703.76	798.03	193.28	39.974717	-109.431797	0.44	229.86	95.00	821.10	9.11	-3.47				
6903.00	1.25	256.97	6797.74	797.86	191.26	39.974717	-109.431804	0.38	261.86	94.00	820.45	7.45	-1.49				
6998.00	1.38	236.87	6892.71	797.00	189.29	39.974714	-109.431811	0.50	275.54	95.00	819.15	5.28	0.30				
7092.00	1.25	226.87	6986.69	795.70	187.57	39.974711	-109.431818	0.24	230.74	94.00	817.49	3.01	0.37				
7187.00	1.50	205.62	7081.66	793.94	186.18	39.974706	-109.431823	0.55	288.57	95.00	815.45	0.64	0.51				
7281.00	1.27	158.29	7175.64	791.90	185.95	39.974700	-109.431823	1.30	234.54	94.00	813.41	-1.35	-0.34				

5D Survey Report

Survey Points (Relative to centre, TVD relative to Well TVD Reference )														
MC (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	altitude (°)	Longitude (°)	DLS (°/100 US ft)	T.Face (°)	CI (US ft)	V/S (US ft)	High to Plan (US ft)	Right to Plan (US ft)	Comment
7375.00	1.63	154.37	7269.61	789.73	186.92	39.974694	-109.431820	0.40	342.63	94.00	811.53	-3.22	-0.67	
7470.00	0.75	51.12	7364.59	788.90	187.99	39.974692	-109.431816	2.05	202.06	95.00	810.98	1.13	-3.79	
7564.00	0.75	63.12	7458.58	789.57	189.01	39.974694	-109.431812	0.17	96.00	94.00	811.87	-0.74	-3.33	
7659.00	0.63	81.00	7553.58	789.93	190.08	39.974695	-109.431809	0.26	127.87	95.00	812.48	-2.54	-2.34	
7753.00	0.31	85.62	7647.57	790.03	190.85	39.974695	-109.431806	0.34	175.55	94.00	812.75	-3.17	-1.70	
7848.00	0.19	140.12	7742.57	789.93	191.21	39.974695	-109.431805	0.27	142.23	95.00	812.74	-3.02	1.76	
7942.00	0.38	189.87	7836.57	789.50	191.25	39.974694	-109.431805	0.31	79.16	94.00	812.34	-0.73	3.15	
8131.00	0.88	170.25	8025.56	787.46	191.39	39.974688	-109.431804	0.28	326.65	189.00	810.38	-2.95	1.92	
8320.00	1.44	182.00	8214.52	783.65	191.55	39.974678	-109.431803	0.32	28.96	189.00	806.72	-5.60	2.04	
8509.00	2.25	170.62	8403.42	777.62	192.08	39.974661	-109.431802	0.47	329.90	189.00	800.98	-11.10	-0.16	
8698.00	2.25	162.12	8592.28	770.43	193.82	39.974641	-109.431795	0.18	265.75	189.00	794.41	-17.42	-2.81	
8884.00	2.11	148.84	8778.14	764.02	196.71	39.974624	-109.431785	0.28	247.94	186.00	788.87	-22.31	-7.82	
8934.00	2.11	148.84	8828.11	762.45	197.66	39.974619	-109.431782	0.00	0.00	50.00	787.57	-23.19	-7.85	PROJECTION TO TD
Formation Points (Relative to centre, TVD relative to Well TVD Reference )														
Name							MC (US ft)	TVD (US ft)						
GREEN RIVER							1196.98	1190.00						
BIRDS NEST							1463.15	1447.00						
MAHOAGANY MARKER							1970.03	1924.00						
WASATCH							4389.56	4285.00						
MESAVERDE							6754.23	6649.00						
SEGO							8911.87	8806.00						